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ARIZONA CORPORATION COMMISSION  
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**BEFORE THE ARIZONA CORPORATION COMMISSION**

IN THE MATTER OF THE APPLICATION  
OF ARIZONA WATER COMPANY, AN  
ARIZONA CORPORATION, FOR A  
DETERMINATION OF THE FAIR VALUE  
OF ITS UTILITY PLANT AND  
PROPERTY, AND FOR ADJUSTMENTS  
TO ITS RATES AND CHARGES FOR  
UTILITY SERVICE FURNISHED BY ITS  
EASTERN GROUP AND FOR CERTAIN  
RELATED APPROVALS.

DOCKET NO. W-01445A-11-0310

**NOTICE OF FILING  
REJOINDER TESTIMONY**

Applicant, Arizona Water Company, hereby files the Rejoinder Testimony of Fredrick K. Schneider, Joseph D. Harris, Joel M. Reiker, Thomas M. Zepp and Pauline M. Ahern in the above-captioned docket.

DATED this 11th day of May, 2012.

ARIZONA WATER COMPANY

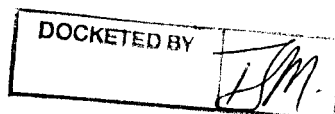
By: *R. W. Geake*

Robert W. Geake  
Vice President and General Counsel  
ARIZONA WATER COMPANY  
Post Office Box 29006  
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and

Arizona Corporation Commission  
**DOCKETED**

MAY 11 2012



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An original and fifteen (15) copies of the foregoing were delivered this 11th day of May, 2012 to:

Docketing Supervisor  
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1200 West Washington Street  
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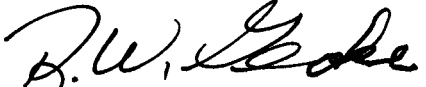
Ms. Lyn Farmer  
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1940 N. Monterey Drive  
Apache Junction, AZ 85120

By: 

# ***ARIZONA WATER COMPANY***



**Docket No. W-01445A-11-0310**

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## **2011 RATE HEARING**

**For Test Year Ending 12/31/10**

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## **PREPARED**

## **REJOINDER TESTIMONY**

**and**

## **EXHIBITS**

---

1 **COMMISSIONERS**

2 Gary Pierce – Chairman  
3 Bob Stump  
4 Sandra D. Kennedy  
5 Paul Newman  
6 Brenda Burns

7 **BEFORE THE ARIZONA CORPORATION COMMISSION**

8 IN THE MATTER OF THE APPLICATION  
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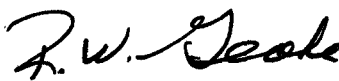
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REJOINDER TESTIMONY**

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15 Schneider, Joseph D. Harris, Joel M. Reiker, Thomas M. Zepp and Pauline M. Ahern in the  
16 above-captioned docket.

17 DATED this 11th day of May, 2012.

18 ARIZONA WATER COMPANY

19  
20 By: 

21 Robert W. Geake  
22 Vice President and General Counsel  
23 ARIZONA WATER COMPANY  
24 Post Office Box 29006  
25 Phoenix, Arizona 85038-9006

26  
27 and  
28

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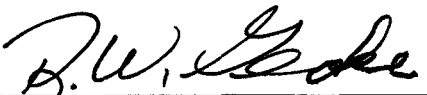
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**ARIZONA WATER COMPANY**



**Docket No. W-01445A-11-0310**

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**2011 RATE HEARING**

**For Test Year Ending 12/31/10**

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**PREPARED  
REJOINDER TESTIMONY & EXHIBITS  
OF  
PAULINE M. AHERN**

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IV. ACC Staff Witness Cassidy's Surrebuttal Testimony Comments on the Cost of Common Equity.....	7

## EXHIBITS

<u>Blue Chip Financial Forecasts</u> December 1, 2010 & February 1, 2011 (Excerpt) .....	PMA-1
<u>New Regulatory Finance</u> , Roger A. Morin. Public Utility Reports, Inc. (2006) pp. 128-129.....	PMA-2
Calculation of the Predictive Risk Premium Model (PRPM™) .....	PMA-3

# ARIZONA WATER COMPANY

## Rejoinder Testimony of Pauline M. Ahern

### I. Introduction

**Q. PLEASE STATE YOUR NAME, EMPLOYER AND OCCUPATION.**

A. My name is Pauline M. Ahern. I am a Principal of AUS Consultants. My business address is 155 Gaither Drive, Suite A, Mt. Laurel, New Jersey 08054.

**Q. ARE YOU THE SAME PAULINE M. AHERN WHO PREVIOUSLY FILED REBUTTAL TESTIMONY IN THIS PROCEEDING?**

A. Yes.

**Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY IN THIS PROCEEDING?**

A. The purpose is to provide rejoinder testimony on behalf of Arizona Water Company ("AWC" or the "Company") in response to Arizona Corporation Commission ("ACC" or the "Commission") Utilities Division ("Staff") witness Jeffrey M. Michlik relative to certain aspects of his surrebuttal testimony position on the Company's proposed Distribution System Improvement Charge ("DSIC"). In addition, I will comment upon Staff witness John A. Cassidy's response to my rebuttal testimony relative to the inadequacy of his recommended common equity cost rate of 9.1%

**Q. HAVE YOU PREPARED EXHIBITS TO SUPPORT YOUR REJOINDER TESTIMONY?**

A. Yes. They have been marked as Exhibit PMA-1 through Exhibit PMA-3.



1 **II. Summary**

2 **Q. PLEASE SUMMARIZE YOUR REJOINDER TESTIMONY.**

3 A. My rejoinder testimony demonstrates the fallacy of certain of Mr. Michlik's  
4 comments in his surrebuttal testimony regarding the Company's proposed DSIC  
5 mechanism.

6 My rejoinder testimony also demonstrates the errors in Mr. Cassidy's  
7 comparison of the risk-free rate I used in my Predictive Risk Premium Model™  
8 ("PRPM™") analysis with that used by Company Witness Dr. Zepp in  
9 determining his recommended common equity cost rate of 12.50%. When these  
10 errors are corrected, my rejoinder testimony clearly demonstrates that the results  
11 of the PRPM™ do indeed support the conservative reasonableness of Dr. Zepp's  
12 recommended 12.50% common equity cost rate given Arizona Water Company's  
13 ("AWC") unique investment risks, as discussed by Dr. Zepp in his direct  
14 testimony.

15 **III. ACC Staff Witness Michlik's Surrebuttal Testimony Comments on DSIC**

16 **Q. MR. MICHLIK SUGGESTS ON PAGE 2 OF HIS SURREBUTTAL TESTIMONY**  
17 **AT LINES 9 - 11, THAT MOST STATES "CONSIDER THE COSTS OF**  
18 **ADOPTING A DSIC TO OUTWEIGH THE BENEFITS." PLEASE COMMENT.**

19 A. Mr. Michlik has provided no documentation from any of the forty-nine (49) states  
20 of the rationales for not adopting a DSIC or similar mechanism. Some states  
21 may have other mechanisms which work like DSICs. In some states, no water  
22 utility may have requested a DSIC yet. Some states do not even regulate water  
23 service. The fact remains that such mechanisms are considered credit  
24 supportive by Standard & Poor's ("S&P") and Moody's. As such, they are  
25 conducive to the maintenance of financial integrity, enabling water utilities to  
26 attract needed new capital on reasonable terms in competition with other  
27 companies of similar risks, consistent with the judicial standards for a fair rate of  
28

1 return established in the Hope<sup>1</sup> and Bluefield<sup>2</sup> decisions, as summarized in my  
2 Rebuttal Testimony at lines 13 – 20 on page 5.

3 **Q. AT LINES 13-14 ON PAGE 3 OF HIS SURREBUTTAL TESTIMONY, MR.**  
4 **MICHLIK STATES THAT "NEGATIVE REGULATORY LAG ACTS IN A**  
5 **POSITIVE MANNER TO ENCOURAGE UTILITIES TO FIND OPERATING**  
6 **EFFICIENCIES." DO YOU AGREE?**

7 **A.** No. On the contrary, regulatory lag does not "act[s] in a positive manner to  
8 encourage utilities to find operating efficiencies." Regulatory lag is a disincentive  
9 to investment in infrastructure necessary to maintain high quality, reliable water  
10 service, regardless of a company's obligation to do so. Regulatory lag induces a  
11 utility to delay needed new investment which can actually negatively affect  
12 operating efficiencies by increasing capital expenditure costs due to such things  
13 as inflation and non-inflationary cost increases. In my opinion, this is not optimal  
14 from either a regulatory or policy perspective. Such a deliberately allowed or  
15 encouraged regulatory lag also encourages a utility to time its capital investments  
16 in replacement infrastructure to avoid an erosion of the allowed return, by  
17 "lumping" such investments closer to the time of a rate case filing, rather than on  
18 optimal construction and scheduling cycles, or at a steady pace between rate  
19 cases.

20 **Q. AT LINES 5 – 9 ON PAGE 7 OF HIS SURREBUTTAL TESTIMONY, MR.**  
21 **MICHLIK STATES THAT "[T]HE COMMISSION AUTHORIZED SPECIAL**  
22 **PROCESSES TO ALLOW RECOVERY OF ARSENIC TREATMENT COSTS...**  
23 **THEY PROVIDE UTILITIES A MORE TIMELY AND EFFICIENT MEANS TO**  
24 **RECOVER ARSENIC REMEDIATION COSTS THAN IS AVAILABLE**  
25 **THROUGH NORMAL RATEMAKING PROCEDURES." PLEASE COMMENT.**

26  
27 <sup>1</sup> Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944).

<sup>2</sup> Bluefield Water Works Improvement Co. v. Public Serv. Comm'n, 262 U.S. 679 (1922).

1 A. In my opinion, it is only logical that this statement is equally applicable to the  
2 Company's requested DSIC mechanism, because such a mechanism "provide[s]  
3 utilities a more timely and efficient means to recover" necessary infrastructure  
4 replacement "costs than is available through normal ratemaking procedures."

5 **Q. AT LINES 15 – 25 ON PAGE 7 OF HIS SURREBUTTAL TESTIMONY, MR.**  
6 **MICHLIK DISCUSSES SOME OF THE DIFFERENCES HE PERCEIVES**  
7 **BETWEEN THE COMPANY'S PROPOSED DSIC AND THE ARSENIC COST**  
8 **RECOVERY MECHANISM ("ACRM"). PLEASE COMMENT.**

9 A. While Mr. Michlik's descriptions of the DSIC and ACRM are correct, the  
10 assumption underlying his rejection of the DSIC relies upon what he perceives to  
11 be the extraordinary nature of the ACRM expenditures and ordinary or routine  
12 nature of DSIC expenditures, as testified to by Residential Utility Consumer  
13 Office ("RUCO") witness William A. Rigsby in his direct testimony. However, as  
14 stated in my rebuttal testimony at page 20, line 17 through page 21, line 4 in  
15 response to Mr. Rigsby's direct testimony,

16  
17 While it is true that these improvements may be considered a part  
18 of doing business, the magnitude of the improvements, the  
19 Company's distressed financial condition and need to attract capital  
20 on reasonable terms in competition with other firms in the capital  
21 markets as well as the fact that the magnitude of the improvements  
22 is in response to the ACC's water loss reduction directive are all  
23 evidence that the improvements covered by the DSIC are anything  
24 but "routine."

25  
26 Consequently, Mr. Michlik's discussion of the perceived differences  
27 between the proposed DSIC and an ACRM are moot and should be disregarded.

28 **Q. AT LINES 4 – 12 ON PAGE 8 OF HIS SURREBUTTAL TESTIMONY, MR.**  
**MICHLIK COMPARES REDUCING WATER LOSSES TO REDUCING**  
**ARSENIC LEVELS. PLEASE COMMENT.**

1 A. Mr. Michlik's argument once again relies upon the concept of routine costs and  
2 the "costs of doing business." While it is true that the amount of arsenic in the  
3 Company's water supply is not a function of the operation of the water system, it  
4 is the Company's responsibility and obligation to remove it in order to provide  
5 reliable and potable water service to its customers. In that respect, the removal  
6 of arsenic is indeed similar to infrastructure replacement costs which also enable  
7 the Company to continue to provide safe (potable) and reliable water service.  
8 Arsenic removal costs, therefore, meet the benchmark of being considered  
9 routine and a part of normal business.

10 **IV. ACC Staff Witness Cassidy's Surrebuttal Testimony Comments on the Cost**  
11 **of Common Equity**

12 **Q. ON PAGE 3, LINE 1 THROUGH PAGE 6, LINE 10 OF HIS SURREBUTTAL**  
13 **TESTIMONY, MR. CASSIDY DISCUSSES WHY HE BELIEVES YOUR**  
14 **REBUTTAL TESTIMONY SUGGESTS THAT DR. ZEPP "HAS**  
15 **SIGNIFICANTLY OVERSTATED ARIZONA WATER'S COST OF EQUITY."**  
16 **PLEASE COMMENT.**

17 A. Mr. Cassidy is incorrect for three reasons. First, his comparison of the risk-free  
18 rate I used in my application of the PRPM<sup>TM</sup>, 3.58%, with the risk-free rate of  
19 5.17% used by Dr. Zepp in arriving at his recommended common equity cost  
20 rate, is not an appropriate comparison. Second, even if comparable, Mr. Cassidy  
21 is incorrect in assuming that there is one-for-one basis point movement in  
22 common equity cost rate for every one basis point movement in interest rates.  
23 Third, Mr. Cassidy is incorrect to reject the use of a forecasted risk-free rate in  
24 cost of capital analysis.

25 **Q. WHY IS THE RISK-FREE RATE YOU USED, 3.58%, NOT COMPARABLE TO**  
26 **DR. ZEPP'S 5.17% RISK-FREE RATE?**  
27  
28

1 A. The average 3.58% 30-year U.S. Treasury note yield I used in my application of  
2 the PRPM<sup>TM</sup>, shown on page 1 of Exhibit PMA-11 accompanying my rebuttal  
3 testimony, is based upon the consensus forecasts of approximately 50  
4 economists of 30-year U.S. Treasury note yields for the six-quarters ending with  
5 the third quarter 2013, from the April 1, 2012 Blue Chip Financial Forecasts  
6 ("Blue Chip"). In contrast, Dr. Zepp's 5.17% risk-free rate is derived from annual  
7 forecasts from the December 1, 2010 Blue Chip for the years 2012, 2013 and  
8 2014, averaged with the 2012, 2013 and 2014 annual forecasts of the Long-Term  
9 Treasury Bond Rate from the February 25, 2011 Value Line Investment Survey –  
10 Selection & Opinion ("S&O"). These two risk-free rates are not comparable for  
11 two reasons. First, they are based upon publications whose dates are not  
12 comparable with my estimates of the risk-free rate. Second, my risk-free rate is  
13 an average quarterly estimate for the next six quarters, or one and one-half (1 ½)  
14 years, while Dr. Zepp's is an average of annual forecasts for the next three years.

15 The six-quarter forecast from Blue Chip comparable to the December  
16 2010 Blue Chip and the February 2011 S&O would be an average of the six-  
17 quarter consensus forecast of U.S. 30-year U.S. Treasury yields from the  
18 December 1, 2010 and February 1, 2011 Blue Chip, which are provided as pages  
19 1 and 2 of Exhibit PMA-1. As shown in note 1 on page 1 of Exhibit PMA-3, the  
20 average forecasted 30-year U.S. Treasury note yield for the six quarters ending  
21 with the first quarter 2012 is 4.28% from the December 1, 2010 Blue Chip, and  
22 4.75% for the six quarters ending with the second quarter 2012 from the  
23 February 1, 2011 Blue Chip. When 4.28% and 4.75% are averaged, an average  
24 risk-free rate of 4.52% results, which, while 94 basis points higher, is comparable  
25 to my risk-free rate of 3.58%.

1 Q. WHY IS MR. CASSIDY INCORRECT TO ASSUME A ONE-FOR-ONE BASIS  
2 POINT MOVEMENT IN THE COMMON EQUITY COST RATE FOR EVERY  
3 ONE BASIS POINT MOVEMENT IN INTEREST RATES?

4 A. Mr. Cassidy is incorrect in stating at lines 23 – 24 on page 4 of his direct  
5 testimony that "for every basis point increase to the risk-free rate, there is a  
6 corresponding one basis point increase to the estimated cost of equity". He is  
7 incorrect because it has been shown empirically that while the cost of equity will  
8 increase as interest rates increase and decrease as interest rates decrease,  
9 there is an inverse relationship between interest rates and equity risk premiums.  
10 In other words, as interest rates decline, equity risk premiums rise and vice  
11 versa, consistent with the empirical literature summarized in Roger A. Morin's  
12 New Regulatory Finance<sup>3</sup> (see page 3 of Exhibit PMA-2). In addition, it has been  
13 determined empirically that for every 100 basis point increase / decrease in  
14 interest rates, equity risk premiums will decrease / increase approximately 50  
15 basis points. As Morin states on page 4 of Exhibit PMA-2:

16  
17 Harris (1986) showed that for every 100 basis point change in  
18 government bond yields, the equity risk premium for utilities  
19 changes 51 basis points in the opposite direction, for a net change  
20 in the cost of equity of 49 basis points. For example, a 100 basis  
21 point decline in government bond yields would lead to a 51 basis  
22 point increase in the equity risk premium and therefore an overall  
23 decrease in the cost of equity of 49 basis points, a result almost  
24 identical to the estimate reported in Morin (2005). As discussed  
25 earlier, similar results were uncovered by McShane (2005), who  
26 examined the statistical relationship between DCF-derived risk  
27 premiums and interest rates using a sample of natural gas  
28 distribution utilities.

The gist of the empirical research on this subject is that the cost of  
equity has changed only half as much as interest rates have  
changed in the past.

---

<sup>3</sup> Morin, Roger A., New Regulatory Finance (Public Utility Reports, Inc., 2006) 128 - 129

1 Thus, there is not a one-for-one basis point change in equity risk  
2 premiums for every basis point change in the risk-free rate.

3 Using the more comparable 4.52% risk-free rate based upon Blue Chip  
4 consensus estimates discussed above and the 3.58% risk-free rate in my  
5 application of the PRPM™ results in a 97 basis point decline in comparable risk-  
6 free rates, not the 159 basis point difference between Dr. Zepp's 5.17% risk-free  
7 rate and the 3.58% risk-free rate. Consequently, the increase in the equity risk  
8 premium is one-half the 97 basis points, or 47 basis points, which results in a  
9 reduction to the PRPM™ derived common equity cost rate of 47 basis points.

10 However, it is not appropriate to deduct the 47 basis points from the  
11 11.05% PRPM™ results for Mr. Cassidy's Water Sample Group, as shown on  
12 page 1 of Exhibit PMA-11 accompanying my rebuttal testimony, because those  
13 results are based upon PRPM™ estimated equity risk premiums through  
14 February 2012. The appropriate PRPM™ equity risk premiums are those  
15 estimated through February 2011, which correspond with Dr. Zepp's cost of  
16 common equity analysis<sup>4</sup>. Using PRPM™ estimated equity risk premiums  
17 through February 2011 results in an average PRPM™ derived common equity  
18 cost rate of 13.59%, ranging from 10.40% - 21.82%, with a midpoint of 16.11%  
19 for Mr. Cassidy's Water Sample Group, which support the conservative  
20 reasonableness of Dr. Zepp's recommended 12.50% common equity cost rate.

21 **Q. WHY IS MR. CASSIDY INCORRECT TO REJECT THE USE OF FORECASTED**  
22 **RISK-FREE RATES IN A COST OF CAPITAL ANALYSIS?**

23 **A.** Mr. Cassidy is incorrect to reject the use of forecasted risk-free rates in a cost of  
24 capital analysis since the cost of capital and ratemaking are both forward looking  
25 and prospective in nature, in that rates set in this proceeding will be collected in  
26

27 <sup>4</sup> Dr. Zepp used dividend yield through February 28, 2011, as well as a risk-free rate derived from Value Line in  
28 December 2010 and Blue Chip in February 2011.

1 the future. The cost of capital is forward looking and prospective in nature as  
2 well, because investors' expectation of future risk is embedded in the market  
3 prices they are willing to pay, as Mr. Cassidy acknowledges at lines 4 – 6 on  
4 page 7 of his Direct Testimony where he states:

5 The cost of equity is the rate of return that investors **expect** to earn  
6 on their investment in a business entity given its risk. In other  
7 words, the cost of equity to the entity is the investors' **expected** rate  
of return on other investment of similar risk.

8 **Q. DOES THAT CONCLUDE YOUR REJOINDER TESTIMONY?**

9 **A.** Yes.



**PMA-1**

Consensus Forecasts Of U.S. Interest Rates And Key Assumptions<sup>1</sup>

Interest Rates	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week End				Average For Month				4Q 2010	1Q 2011	2Q 2011	3Q 2011	4Q 2011	1Q 2012
	Nov.24	Nov.19	Nov.12	Nov.5	Oct.	Sep.	Aug.	3Q 2010						
Federal Funds Rate	0.22	0.19	0.18	0.20	0.19	0.19	0.19	0.19	0.2	0.2	0.2	0.2	0.4	0.7
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.3	3.3	3.3	3.3	3.5	3.7
LIBOR, 3-mo.	0.29	0.29	0.29	0.29	0.29	0.29	0.36	0.36	0.3	0.3	0.4	0.4	0.6	1.0
Commercial Paper, 1-mo.	0.21	0.21	0.19	0.21	0.21	0.20	0.20	0.20	0.2	0.2	0.3	0.4	0.6	0.9
Treasury bill, 3-mo.	0.15	0.14	0.13	0.13	0.13	0.15	0.16	0.16	0.1	0.2	0.2	0.3	0.5	0.7
Treasury bill, 6-mo.	0.20	0.19	0.16	0.16	0.18	0.19	0.19	0.19	0.2	0.2	0.3	0.4	0.6	0.9
Treasury bill, 1 yr.	0.27	0.27	0.24	0.22	0.23	0.26	0.26	0.27	0.3	0.3	0.4	0.5	0.8	1.1
Treasury note, 2 yr.	0.50	0.52	0.46	0.35	0.38	0.48	0.52	0.54	0.5	0.6	0.7	0.9	1.2	1.5
Treasury note, 5 yr.	1.49	1.51	1.25	1.11	1.18	1.41	1.47	1.55	1.3	1.5	1.6	1.9	2.2	2.5
Treasury note, 10 yr.	2.86	2.89	2.68	2.61	2.54	2.65	2.70	2.79	2.7	2.7	2.9	3.1	3.3	3.5
Treasury note, 30 yr.	4.24	4.30	4.22	4.04	3.87	3.77	3.80	3.85	4.0	4.1	4.2	4.3	4.5	4.6
Corporate Aaa bond	4.91	4.98	4.90	4.75	4.68	4.53	4.49	4.58	4.7	4.7	4.8	5.0	5.1	5.3
Corporate Baa bond	5.96	6.03	5.95	5.79	5.72	5.66	5.66	5.78	5.8	5.8	5.8	6.0	6.1	6.2
State & Local bonds	4.69	4.72	4.24	4.02	3.87	3.87	4.03	4.07	4.2	4.3	4.3	4.4	4.5	4.6
Home mortgage rate	4.36	4.39	4.17	4.24	4.23	4.35	4.43	4.45	4.3	4.4	4.5	4.7	4.9	5.1

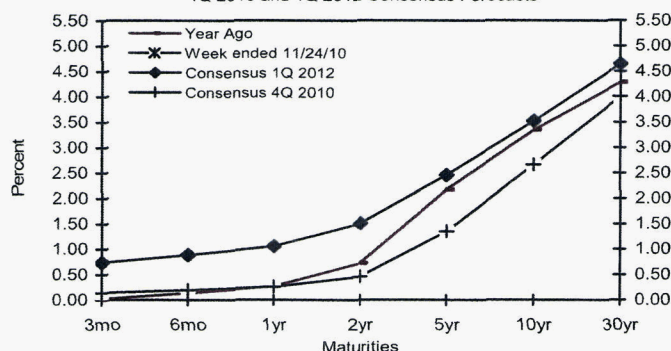
  

Key Assumptions	History								Consensus Forecasts-Quarterly					
	4Q 2008	1Q 2009	2Q 2009	3Q 2009	4Q 2009	1Q 2010	2Q 2010	3Q 2010	4Q 2010	1Q 2011	2Q 2011	3Q 2011	4Q 2011	1Q 2012
Major Currency Index	81.5	82.9	79.6	76.4	72.8	74.8	77.6	75.9	73.0	73.0	72.9	73.0	73.1	73.2
Real GDP	-6.8	-4.9	-0.7	1.6	5.0	3.7	1.7	2.5	2.3	2.5	2.7	3.0	3.1	3.2
GDP Price Index	-1.2	1.1	0.3	0.7	-0.2	1.0	1.9	2.2	1.3	1.5	1.4	1.5	1.6	1.8
Consumer Price Index	-9.2	-2.2	1.9	3.7	2.6	1.5	-0.7	1.5	1.9	1.6	1.5	1.8	1.9	2.1

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Interest rate definitions are the same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for the Fed's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).

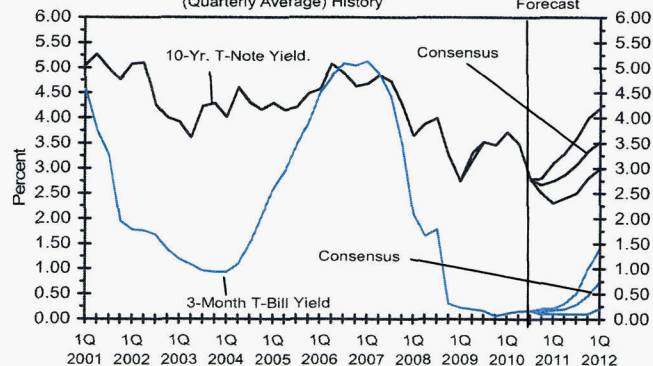
## U.S. Treasury Yield Curve

Week ended November 26, 2010 and Year Ago vs.  
4Q 2010 and 1Q 2012 Consensus Forecasts



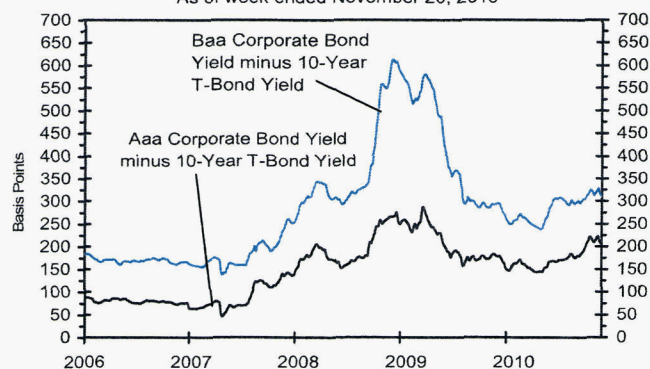
## U.S. 3-Mo. T-Bills &amp; 10-Yr. T-Note Yield

(Quarterly Average) History Forecast



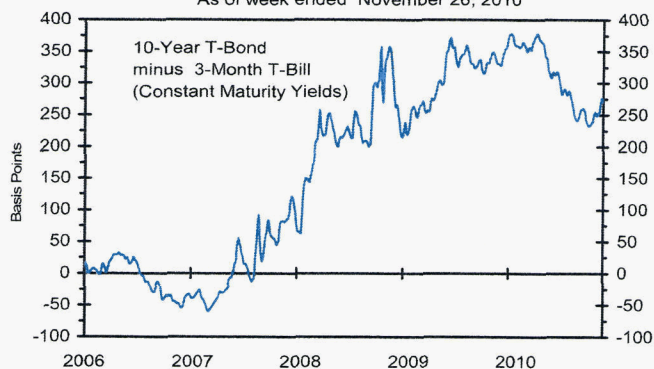
## Corporate Bond Spreads

As of week ended November 26, 2010



## U.S. Treasury Yield Curve

As of week ended November 26, 2010





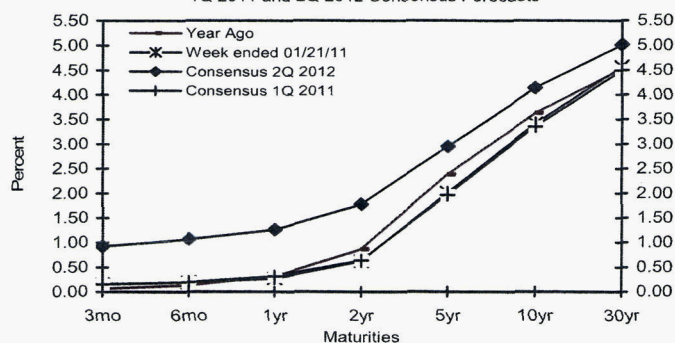
# Consensus Forecasts Of U.S. Interest Rates And Key Assumptions<sup>1</sup>

	History								Consensus Forecasts-Quarterly Avg.						
	Average For Week End				Average For Month				Latest Q	1Q	2Q	3Q	4Q	1Q	2Q
Interest Rates	Jan. 21	Jan. 14	Jan. 7	Dec. 31	Dec.	Nov.	Oct.	4Q 2010	2011	2011	2011	2011	2012	2012	
Federal Funds Rate	0.17	0.17	0.19	0.19	0.19	0.19	0.19	0.19	0.2	0.2	0.2	0.3	0.5	0.9	
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.3	3.3	3.3	3.3	3.6	3.9	
LIBOR, 3-mo.	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.3	0.3	0.4	0.5	0.8	1.2	
Commercial Paper, 1-mo.	0.20	0.19	0.19	0.19	0.19	0.20	0.21	0.20	0.2	0.2	0.3	0.4	0.7	1.0	
Treasury bill, 3-mo.	0.16	0.15	0.14	0.14	0.14	0.14	0.13	0.14	0.2	0.2	0.2	0.3	0.6	0.9	
Treasury bill, 6-mo.	0.19	0.18	0.19	0.20	0.19	0.18	0.18	0.18	0.2	0.2	0.3	0.5	0.7	1.1	
Treasury bill, 1 yr.	0.27	0.27	0.29	0.30	0.29	0.25	0.23	0.26	0.3	0.4	0.5	0.7	1.0	1.3	
Treasury note, 2 yr.	0.62	0.60	0.65	0.67	0.62	0.45	0.38	0.48	0.6	0.8	0.9	1.1	1.5	1.8	
Treasury note, 5 yr.	2.01	1.96	2.04	2.07	1.93	1.35	1.18	1.49	2.0	2.1	2.2	2.5	2.7	3.0	
Treasury note, 10 yr.	3.42	3.36	3.40	3.38	3.29	2.76	2.54	2.86	3.4	3.5	3.6	3.8	4.0	4.1	
Treasury note, 30 yr.	4.57	4.50	4.48	4.43	4.42	4.19	3.87	4.16	4.5	4.6	4.7	4.8	4.9	5.0	
Corporate Aaa bond	5.07	5.01	5.01	4.98	5.02	4.87	4.68	4.86	5.1	5.2	5.3	5.4	5.5	5.7	
Corporate Baa bond	6.12	6.07	6.09	6.07	6.10	5.92	5.72	5.91	6.1	6.2	6.3	6.4	6.5	6.7	
State & Local bonds	5.41	5.39	5.08	4.95	4.92	4.40	3.87	4.40	5.2	5.2	5.3	5.4	5.4	5.5	
Home mortgage rate	4.74	4.71	4.77	4.86	4.71	4.30	4.23	4.41	4.8	4.9	5.1	5.3	5.5	5.6	
	History								Consensus Forecasts-Quarterly						
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	
Key Assumptions	2009	2009	2009	2009	2010	2010	2010	2010	2011	2011	2011	2011	2012	2012	
Major Currency Index	82.9	79.6	76.4	72.8	74.8	77.6	75.9	73.0	73.2	73.5	73.6	73.8	74.0	74.2	
Real GDP	-4.9	-0.7	1.6	5.0	3.7	1.7	2.6	3.2	3.4	3.3	3.4	3.4	3.1	3.2	
GDP Price Index	1.1	0.3	0.7	-0.2	1.0	1.9	2.1	0.3	1.6	1.4	1.5	1.6	1.8	1.8	
Consumer Price Index	-2.2	1.9	3.7	2.6	1.5	-0.7	1.5	2.6	2.2	1.5	1.9	1.9	2.0	2.0	

Forecasts for interest rates and the Federal Reserve's Major Currency Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index and Consumer Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data for interest rates except LIBOR is from Federal Reserve Release (FRSR) H.15. LIBOR quotes available from *The Wall Street Journal*. Interest rate definitions are the same as those in FRSR H.15. Treasury yields are reported on a constant maturity basis. Historical data for the Fed's Major Currency Index is from FRSR H.10 and G.5. Historical data for Real GDP and GDP Chained Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index (CPI) history is from the Department of Labor's Bureau of Labor Statistics (BLS).

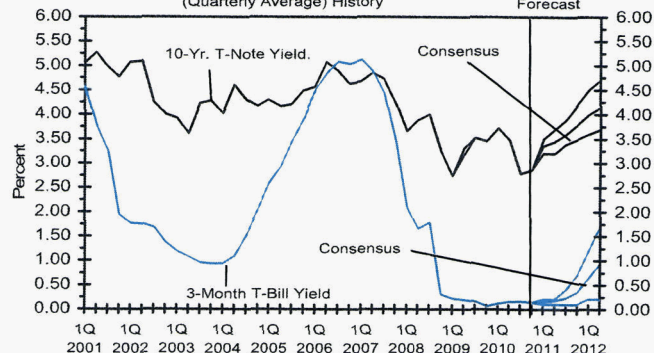
## U.S. Treasury Yield Curve

Week ended January 21, 2011 and Year Ago vs.  
1Q 2011 and 2Q 2012 Consensus Forecasts



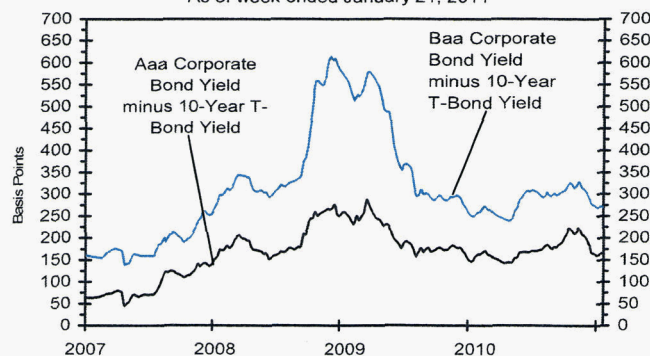
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(Quarterly Average) History



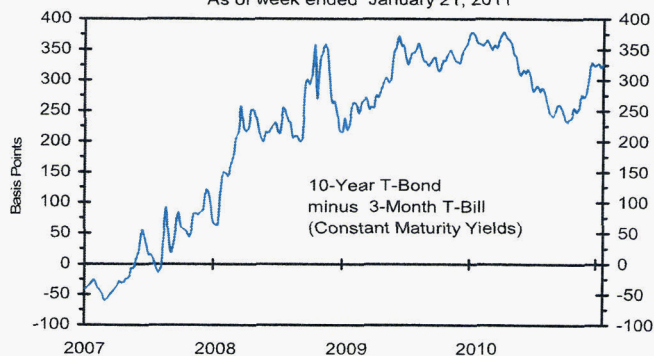
## Corporate Bond Spreads

As of week ended January 21, 2011



## U.S. Treasury Yield Curve

As of week ended January 21, 2011



**PMA-2**

**NEW  
REGULATORY  
FINANCE**

**Roger A. Morin, PhD**

**2006  
PUBLIC UTILITIES REPORTS, INC.  
Vienna, Virginia**

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## New Regulatory Finance

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Any forward-looking cost of capital calculation already embodies tax effects since investors price securities on the basis of after-tax returns. Besides, a very large proportion of trading is conducted by tax-exempt financial institutions (pension funds, mutual funds, 401K, etc.) for whom tax issues are largely immaterial.

The existence of a negative risk premium is highly unlikely, as it is at serious odds with the basic tenets of finance, economics, and law. Using proper definitions for expected rates of return of equity and debt, the preponderance of the evidence indicates that the negative risk premium does not exist. Several risk premium studies cited in this chapter have found positive risk premiums well in excess of 5% over the last decade. Risk premiums do narrow during unusually turbulent and volatile interest rate environments, but then return to normal levels. They are most unlikely to ever become negative.

### 4.7 Risk Premium Determinants

Fundamentally, the primary determinant of expected returns is risk. To wit, the various paradigms of financial theory, including the Capital Asset Pricing Model and the Arbitrage Pricing Model covered in subsequent chapters, posit fundamental relationships between return and risk. There are also secondary influences on the relative magnitude of the risk premium, however, including the level of interest rates, default risk, and taxes.

#### Interest Rates

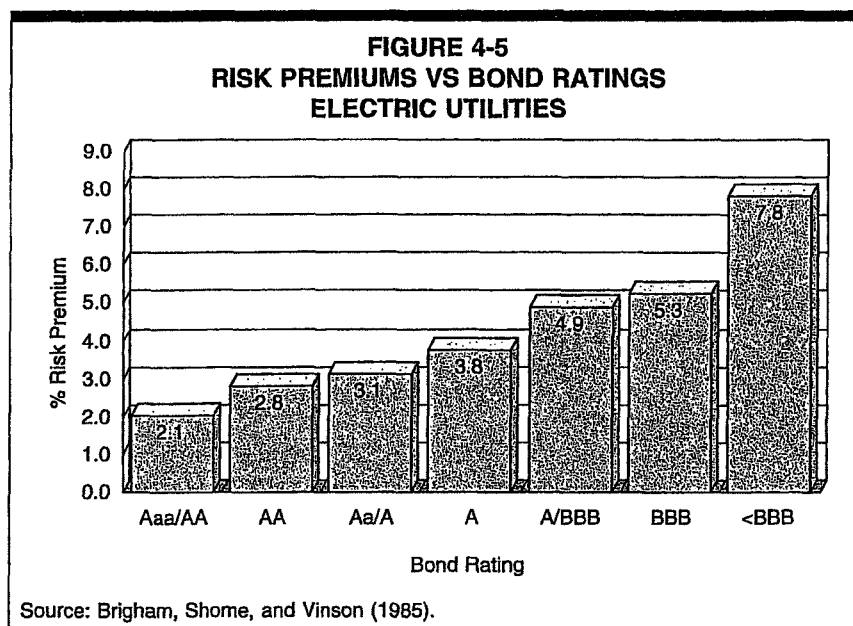
Published studies by Brigham, Shome, and Vinson (1985), Harris (1986), Harris and Marston (1992, 1993), Carleton, Chambers, and Lakonishok (1983), Morin, (2005), and McShane (2005), and others demonstrate that, beginning in 1980, risk premiums varied inversely with the level of interest rates—rising when rates fell and declining when interest rates rose. The reason for this relationship is that when interest rates rise, bondholders suffer a capital loss. This is referred to as interest rate risk. Stockholders, on the other hand, are more concerned with the firm's earning power. So, if bondholders' fear of interest rate risk exceeds shareholders' fear of loss of earning power, the risk differential will narrow and hence the risk premium will shrink. This is particularly true in high inflation environments. Interest rates rise as a result of accelerating inflation, and the interest rate risk of bonds intensifies more than the earnings risk of common stocks, which are partially hedged from the ravages of inflation. This phenomenon has been termed as a "lock-in" premium. Conversely in low interest rate environments, when bondholders' interest rate fears subside and shareholders' fears of loss of earning power dominate, the risk differential will widen and hence the risk premium will increase.

## Chapter 4: Risk Premium

Harris (1986) showed that for every 100 basis point change in government bond yields, the equity risk premium for utilities changes 51 basis points in the opposite direction, for a net change in the cost of equity of 49 basis points. For example, a 100 basis point decline in government bond yields would lead to a 51 basis point increase in the equity risk premium and therefore an overall decrease in the cost of equity of 49 basis points, a result almost identical to the estimate reported in Morin (2005). As discussed earlier, similar results were uncovered by McShane (2005), who examined the statistical relationship between DCF-derived risk premiums and interest rates using a sample of natural gas distribution utilities.

The gist of the empirical research on this subject is that the cost of equity has changed only half as much as interest rates have changed in the past. The knowledge that risk premiums vary inversely to the level of interest rates can be used to adjust historical risk premiums to better reflect current market conditions. Thus, when interest rates are unusually high (low), the appropriate current risk premium is somewhat below (above) that long-run average. The empirical research cited above provides guidance as to the magnitude of the adjustment.

Risk premiums also tend to fluctuate with changes in investor risk aversion. Such changes can be tracked by observing the yield spreads between different bond rating categories over time. Brigham, Shome, and Vinson (1985) examined the relationship between risk premium and bond rating and found, unsurprisingly, that the risk premiums are higher for lower rated firms than for higher rated firms. Figure 4-5 shows the results graphically.





**PMA-3**

Arizona Water Company  
Calculation of the Predictive Risk Premium Model™ (PRPM™) Through February 2011  
for Dr. Zepp's Water Sample Group

	American States Water Co.	American Water Works Co., Inc.	Aqua America, Inc.	California Water Group	Connecticut Water Service, Inc.	Middlesex Water Co.	SJW Corp.
Average Variance	0.38%	0.46%	0.50%	0.32%	0.29%	0.28%	0.44%
GARCH Coefficient	1.380914635	2.934150039	2.115588499	1.698861544	1.629190293	1.870953568	1.317803123
Projected Company Risk Premium	6.56%	17.30%	13.40%	6.82%	5.88%	6.42%	7.10%
Risk-Free Rate (1)	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%	4.52%
PRPM Result	11.08%	21.82%	17.92%	11.34%	10.40%	10.94%	11.62%
Average for Dr. Zepp's Water Sample Group							13.59%

## Notes:

- (1) Average of the six quarter projected 30 year Treasury note yields provided by Blue Chip Financial Forecasts for December 1, 2010 and February 1, 2011 shown below:

## December 1, 2010 Blue Chip Financial Forecast:

Q4 2010	4.0%
Q1 2011	4.1%
Q2 2011	4.2%
Q3 2011	4.3%
Q4 2011	4.5%
Q1 2012	4.6%
Average	4.28%

## February 1, 2011 Blue Chip Financial Forecast:

Q1 2011	4.5%
Q2 2011	4.6%
Q3 2011	4.7%
Q4 2011	4.8%
Q1 2012	4.9%
Q2 2012	5.0%
Average	4.75%

Average of December 2010 and February 2011 Forecasts:

4.52%

***ARIZONA WATER COMPANY***



**Docket No. W-01445A-11-0310**

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**2011 RATE HEARING**

**For Test Year Ending 12/31/10**

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**PREPARED  
REJOINDER TESTIMONY & EXHIBITS  
OF  
JOSEPH D. HARRIS**

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## EXHIBITS

NAWC WATER POLICY FORUM FOR STATE PUBLIC UTILITY COMMISSION STAFF SUMMARY REPORT, DECEMBER 2010.....	EXHIBIT A
OFF-SITE FACILITIES FEE TARIFF.....	EXHIBIT B

**ARIZONA WATER COMPANY**

**Rejoinder Testimony of**

**Joseph D. Harris**

**I. Introduction and Purpose of Testimony**

**Q. PLEASE STATE YOUR NAME, EMPLOYER AND OCCUPATION.**

A. My name is Joseph D. Harris. I am employed by Arizona Water Company (the "Company") as Vice President and Treasurer.

**Q. ARE YOU THE SAME JOSEPH D. HARRIS THAT PREVIOUSLY PROVIDED DIRECT AND REBUTTAL TESTIMONY IN THIS MATTER?**

A. Yes.

**Q. HAVE YOU REVIEWED THE SURREBUTAL TESTIMONY FILED BY THE OTHER PARTIES TO THIS PROCEEDING?**

A. Yes. I have reviewed the surrebuttal testimony of each of the witnesses of the Arizona Corporation Commission's ("Commission") Utilities Division Staff ("Staff") and the Residential Utility Consumer Office ("RUCO").

**Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. The purpose of my rejoinder testimony is to respond to the surrebuttal testimony of Staff witnesses Jeffrey M. Michlik, Katrin Stukov and Bentley Erdwurm, and RUCO witnesses William A. Rigsby and Robert B. Mease.

**Q. HOW IS YOUR TESTIMONY ORGANIZED?**

A. My testimony is presented in four sections including this introductory Section I. In Section II, I present the Company's response to both Staff's and RUCO's witnesses concerning the implementation of a Distribution System Improvement Charge ("DSIC"). In Section III, I respond to Staff's and RUCO's testimony concerning the consolidation of San Manuel, Oracle and SaddleBrooke Ranch into the Falcon Valley system. Finally, in Section IV I respond to Staff's

1 recommendation to lower the amount of the Company's proposed Off-Site  
2 Facilities Fee.

3 **II. Distribution System Improvement Charge**

4 **Q. IN STAFF'S SURREBUTTAL TESTIMONY MR. MICHLIK OFFERS AN**  
5 **ARTICLE FROM FOOD AND WATER WATCH. WHAT IS THE OBJECTIVE**  
6 **OF THIS ORGANIZATION?**

7 A. According to the Food and Water Watch web site, the organization states as its  
8 objective the advocacy of public control of water resources and services.

9 **Q. THE ARTICLE TAKES SPECIAL AIM AT PENNSYLVANIA AS THE FIRST**  
10 **STATE TO AUTHORIZE A DSIC. HAS THE PENNSYLVANIA PUBLIC**  
11 **UTILITY COMMISSION ("PPUC") MADE ANY PUBLIC COMMENTS ABOUT**  
12 **THE DSIC?**

13 A. Yes. Included in the Company's DSIC study and attached as an exhibit to my  
14 direct testimony were two excerpts of statements by PPUC Chairmen Wendell F.  
15 Holland and Commissioner Norma Brownell that discussed the benefits of  
16 implementing a DSIC. More recently, at the 2010 National Association of Water  
17 Companies ("NAWC") Commission Staff Water Policy Forum, Steve Klick, the  
18 Executive Policy Manager to Commissioner Powelson of the PPUC, spoke about  
19 DSIC, noting that the program has operated for over 10 years with virtually no  
20 known customer complaints. In addition, he outlined the following specific  
21 benefits of the DSIC program in Pennsylvania:

- 22 • It addresses aging infrastructure that presents water quality
- 23 problems;
- 24 • Proactively addresses main breaks (boil water notices);
- 25 • New mains have been installed to eliminate dead ends, that is, it
- 26 facilitates looping projects;
- 27 • Reduces unaccounted for water;
- 28 • Replaces fire hydrants and larger pipe for fire flows;

- Provides economic reliability in the community;
- Allows coordination with Departments of Transportation and local government;
- Reduces rate case expense;
- Promotes the acquisition of small and non-viable water systems;
- Allows for proactive planning;
- Accelerates the replacement of aging infrastructure;
- Creates a positive impact on capital attraction; and
- Phase-in cost recovery (gradualism)

Mr. Klick went on to say that because of the success of the program in promoting replacement of infrastructure and lack of customer complaints, the PPUC recently increased the limit to 7.5% of revenues between rate cases.<sup>1</sup>

**Q. DO MR. KLICK'S COMMENTS SUPPORT THE ASSERTIONS FOUND IN THE ARTICLE ATTACHED TO MR. MICHLIK'S TESTIMONY?**

A. No. Mr. Klick offered the comments above based on the actual experience of the PPUC in Pennsylvania, which contradicts the assertions made in the article.

**Q. ALTHOUGH STAFF AND RUCO SAY THEY DO NOT SUPPORT THE DSIC BOTH HAVE OFFERED EXTENSIVE COMMENTS ON WHAT A DSIC SHOULD CONTAIN IF APPROVED. HOW DO YOU RESPOND TO THESE RECOMMENDATIONS?**

A. The Company is encouraged that both Staff and RUCO are offering testimony on how a DSIC mechanism would work and that most of the fifteen conditions outlined by Staff are similar to the Company's initial proposal. Except for minor differences, the four conditions outlined by RUCO are already included in Staff's proposed fifteen conditions so I will address Staff's conditions and point out the

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<sup>1</sup> Exhibit A - Steve Klick, Executive Policy Manager to Commissioner Powelson, Pennsylvania Public Utility Commission National Association of Water Companies, "Water Policy Forum for State Public Utility Commission Staff, Summary Report, December 2010" pages 38 - 39

1 differences from the conditions in RUCO's proposal. The following are Staff's  
2 conditions which are either the same or similar to the Company's proposal:

3 7. Limiting the plant items eligible for a DSIC to those in the following  
4 accounts:

- 5 a. Account 343 - Transmission and Distribution Mains
- 6 b. Account 344 - Fire Mains
- 7 c. Account 345 - Services
- 8 d. Account 346 - Meters
- 9 e. Account 347 - Meter Installations
- 10 f. Account 348 - Hydrants

11 8. Requiring that the filings contain the total amount of plant built  
12 during the period reconciled to the amounts recorded by individual plant account,  
13 along with all supporting documentation and any required regulatory permits.

14 9. Directing the Company to record any plant items replaced in  
15 accordance with the NARUC Uniform System of Accounts and to include  
16 documentation showing these transactions in all filings.

17 12. Directing the Company to notify customers of changes in the DSIC  
18 by including appropriate explanatory information on the first bill they receive  
19 following any change in the DSIC rate as well as in the first billing following the  
20 effective date of rates established in this rate case.

21 13. Specifying that the costs of only replacement facilities (from the six  
22 accounts listed above) to serve existing customers are recoverable through a  
23 DSIC. Specifying that projects receiving funds from federal, state and other non-  
24 investor sources are not DSIC eligible property.

25 14. Application of the DSIC charge as a percentage carried to two  
26 decimal places (e.g., 1.54 percent) to the total amount billed to each customer  
27 under the Company's otherwise applicable rates and charges.



1 Q. ARE THERE OTHER CONDITIONS THAT STAFF HAS PRESENTED THAT,  
2 WHILE NOT PART OF THE COMPANY'S PROPOSAL, WOULD BE  
3 ACCEPTABLE TO THE COMPANY?

4 A. Yes. They are:

5 2. Requiring the Company to submit quarterly filings for the first year,  
6 semi-annual filings thereafter, and a cumulative annual report.

7 3. Requiring that charges be revised and become effective on a yearly  
8 basis.

9 4. Directing Staff to review the Company's initial annual filing and  
10 prepare a memorandum and recommended order to be approved by the  
11 Commission before the initial DSIC surcharge is implemented. Staff will review  
12 subsequent filings at its discretion (but no later than the Company's next rate  
13 case), however, the DSIC surcharges would become effective 30 days after the  
14 annual filing.

15 5. Requiring that any over-collections (for overcharges due to  
16 improperly calculated DSICs after the initial year) be refunded with interest at the  
17 weighted average cost of capital ("WACC") authorized in the Company's most  
18 recent rate case. Such refund would be implemented as determined by the  
19 Commission in a future rate case.

20 Additionally, Staff's condition 11 mirrors the Company's proposal to submit  
21 an earnings test although it is unclear what Staff means by the statement "The  
22 earnings test should be based on the most recent available operating income  
23 *adjusted for any operating revenue and expense adjustments adopted in this rate*  
24 *proceeding ...*".

25 Q. WHAT ARE THE AREAS WHERE THERE ARE STILL DIFFERENCES OF  
26 OPINION CONCERNING THE DETAILS OF A DSIC?

27 A. There are four areas of difference; a) the systems to which a DSIC would apply,  
28 b) the cumulative and annual cap, c) whether and to what extent an O&M credit

for cost savings should be applied, and d) the requirement to demonstrate reductions in water loss.

**Q. DO YOU AGREE WITH STAFF AND RUCO'S RECOMMENDATION LIMITING THE DSIC TO BISBEE, MIAMI AND ORACLE/SADDLEBROOKE RANCH?**

A. No. The Company presented extensive and detailed testimony concerning the need for substantial infrastructure replacement not only for these systems but for the systems in Apache Junction and Superior as well. The need for substantial infrastructure replacement in Apache Junction and Superior is further discussed in Mr. Schneider's rejoinder testimony.

**Q. BOTH STAFF AND RUCO HAVE RECOMMENDED ANNUAL AND OVERALL CAPS THAT ARE LESS THAN THE COMPANY'S PROPOSAL. HAS THE COMPANY RECONSIDERED ITS PROPOSAL OF AN ANNUAL CAP OF 2.5% AND AN OVERALL CAP OF 7.5%?**

A. A review of the states with DSIC-type mechanisms included on Exhibit D of my direct testimony shows an average overall cap of 6.25%, which is very close to Staff's proposed cap of 6%. Based on this review, the Company would accept Staff's proposal of an overall cap of 6% with an annual cap of 2%.

**Q. BOTH STAFF AND RUCO HAVE PROPOSED DSIC REVENUE REDUCTIONS TO ACCOUNT FOR COST SAVINGS, 10% FROM STAFF AND 15% FROM RUCO. HAS EITHER PARTY SUPPLIED EVIDENCE TO SUPPORT THEIR PERCENTAGES?**

A. No. Neither Staff nor RUCO offered any evidence to support these percentages. While RUCO initially offered the opinion that a specified per foot credit for every foot of main replaced should be made, that has now been withdrawn in favor of a flat 15% cost savings on every dollar of DSIC revenue generated. While the per foot credit at least was supported by being advocated in the state of Maryland in a natural gas rate case, the 15%, like Staff's 10%, comes with no support whatsoever.

1 **Q. WILL THERE BE SIGNIFICANT TRANSMISSION AND DISTRIBUTION**  
2 **EXPENSE SAVINGS AS A RESULT OF THESE INFRASTRUCTURE**  
3 **REPLACEMENTS?**

4 A. Eventually, yes. However, the Company has identified over 371,000 feet of  
5 water mains and 3,850 failing plastic service lines and an additional 4,915  
6 service lines on failing water mains that need to be replaced. Based on the three  
7 year plan the Company presented to replace these failing water mains and  
8 service lines, it will take over thirty years to replace the 371,000 feet of failing  
9 water lines and sixteen years to replace the 3,850 failing plastic service lines and  
10 the additional 4,915 service lines on failing water mains. During the extended  
11 time period needed to complete these replacements, the remaining water lines  
12 and services will continue to age and fail, thus increasing maintenance costs.

13 **Q. IF THE COMMISSION DETERMINES THAT A DSIC REVENUE REDUCTION**  
14 **IS APPROPRIATE, HOW WOULD YOU RECOMMEND THAT IT BE**  
15 **DETERMINED?**

16 A. I would recommend that the credit be determined on a per unit basis, i.e., feet of  
17 main, number of services, etc., and be based upon the amount of Transmission  
18 and Distribution maintenance expense included in the approved revenue  
19 requirement. Since each asset class that is eligible for DSIC recovery (mains,  
20 services, etc.) has a corresponding maintenance expense account, this  
21 calculation should be straightforward and easily understood.

22 **Q. CAN YOU PROVIDE AN EXAMPLE?**

23 A. Yes. The Oracle/SaddleBrooke Ranch system has adjusted test year T&D  
24 maintenance expense for services of \$22,588 and 1,630 test year services. The  
25 credit would be determined by dividing the amount of maintenance expense by  
26 the number of services and multiplying the result by the number of services  
27 replaced. For this example, assume that the Company replaced 100 services.  
28 The table below illustrates this calculation:

Line No.		
1.	T&D Maintenance - Services	\$ 22,588
2.		
3.	Number of Services	1,630
4.		
5.	Maintenance Expense per Service	\$ 14
6.	[Ln. 1 / Ln. 3]	
7.	Number of Services Replaced	100
8.		
9.	T&D Maintenance Credit	\$ 1,400
	[Ln. 5 * Ln. 7]	

**Q. WHAT ABOUT REDUCED PUMPING COSTS?**

A. If a credit for reduced pumping costs is considered it should be determined on a per 1,000 gallons basis and based on adjusted test year expenses for Source of Supply, Pumping and Water Treatment expenses.

**Q. HOW WOULD A PUMPING CREDIT BE DETERMINED?**

A. The Oracle/SaddleBrooke Ranch system has adjusted test year Source of Supply, Pumping and Water Treatment expenses of \$5,203, \$107,154 and \$39,396 respectively. Additionally, total production for the test year was 150,022 thousand gallons. Assume for this example that as a result of the Company replacing 100 services water loss is reduced by 1%. The table below illustrates the calculation:

Line No.		
1.	Source of Supply Expenses	\$ 5,203
2.	Pumping Expenses	107,154
3.	Water Treatment Expenses	39,396
4.	Total Production Costs	\$ 151,753
5.		
6.	Water Produced (1,000 gallons)	150,022
7.		
8.	Cost per 1,000 gallons produced	\$ 1.01
9.	[Ln. 4 / Ln. 6]	
10.	Water Loss Reduction Achieved	1.00%
11.		
12.	Pumping Credit	\$ 1,518
	[(Ln. 10 * Ln. 6) * Ln.8]	

1 Q. ARE THE CALCULATIONS DESCRIBED ABOVE A BETTER WAY TO  
2 DETERMINE COST SAVINGS CREDITS AS OPPOSED TO ARBITRARY  
3 PERCENTAGES?

4 A. Yes. Because the calculations described above are tied to the revenue  
5 requirement upon which rates have been set there is a direct relationship  
6 between the cost savings credit and the revenues in effect.

7 Q. DO YOU AGREE WITH STAFF'S RECOMMENDATION THAT IF THE  
8 COMPANY CANNOT DEMONSTRATE A REDUCTION IN WATER LOSS, THE  
9 DSIC MONIES COLLECTED MAY BE REQUIRED TO BE REFUNDED TO  
10 RATEPAYERS?

11 A. No. Reductions in water loss alone are not, and have never been, the sole basis  
12 of prudence in regulatory proceedings. The Company must make investments in  
13 infrastructure and place them in service in order to begin recovering costs  
14 pursuant to DSIC. Staff's recommendation constitutes a taking of utility property  
15 that represents a prudent investment that would be serving customers, and is  
16 analogous to disallowing a well head arsenic treatment plant, which produces  
17 water within the maximum contaminant level because other wells in the same  
18 system experience a subsequent increase in arsenic levels.

19 Staff's requirement would add a new prudence standard to investments in  
20 water mains and services that would otherwise not be accepted in a traditional  
21 rate proceeding. Additionally, Staff's proposed recommendation is inappropriate  
22 for the following reasons:

23 1. While individual sections of aging infrastructure will be replaced, the  
24 remaining infrastructure will continue to age and show increasing rates of failure  
25 and leaks. As I discussed earlier, the plan that the Company presented to  
26 replace failing water mains and service lines, will take many years to complete  
27 and during this time the remaining water mains and services will continue to age  
28 and fail.

2. Until the Company is able to reduce the amount of aging infrastructure that is at or near the end of its useful life to a manageable level, water loss could actually increase.

3. If the Commission does not adopt the Company's normalized Pumping and T&D expenses, the Company's ability to increase its efforts to reduce water loss will be inhibited.

4. Staff, although still recommending denial of a DSIC, is recommending that if a DSIC is approved, it should be capped at 6 percent of revenues with a 2 percent annual cap. This restriction, although accepted by the Company in Rejoinder Testimony, may be insufficient to replace enough of the aging infrastructure to cause water loss to reduce in the short term.

**Q. ARE THERE OTHER FACTORS THAT COULD CAUSE THE WATER LOSS PERCENTAGE TO RISE?**

A. Yes. Significant natural phenomenon such as the winter freeze of 2011, reductions in sales and a single event like a large main break resulting in the loss of large volumes of water can all drive up the water loss percentage despite a company's efforts at replacing failing infrastructure.

**Q. IS THERE A MORE REASONABLE PRUDENCY TEST APPLICABLE TO DSIC ELIGIBLE PLANT?**

A. Aside from the traditional regulatory principles guiding prudent investments discussed above, the only reasonable standard is whether or not a section of main has passed any required pressure and leakage tests. This standard renders Staff's recommendation moot because new water mains cannot be placed in service without passing these required tests.

**III. Rate Consolidation**

**Q. HAS THE COMPANY RECONSIDERED ITS PROPOSAL CONCERNING THE CONSOLIDATION OF SAN MANUEL, ORACLE AND SADDLEBROOKE RANCH INTO THE FALCON VALLEY SYSTEM?**

1 A. Yes. Due to the Company's successful negotiation with BHP Copper, Inc. to  
2 reduce the impact of the cost associated with the purchased water cost increase  
3 in San Manuel, the Company has reconsidered its proposal concerning the  
4 consolidation of San Manuel into the Falcon Valley system at this time. Because  
5 of the increased impact full consolidation would have on San Manuel, the  
6 Company agrees with RUCO's position that Oracle and SaddleBrooke Ranch  
7 should be fully consolidated but San Manuel should remain as a standalone  
8 system at this time.

9 **Q. DOES STAFF STILL RECOMMEND THAT ORACLE AND SADDLEBROOKE**  
10 **RANCH REMAIN AS SEPARATE SYSTEMS?**

11 A. Yes. Staff continues to state that it is rejecting consolidation of these systems  
12 because of the adverse impacts to SaddleBrooke Ranch customers associated  
13 with consolidation. Staff did not offer any testimony about what these adverse  
14 impacts are. Schedule JMM-1 of Mr. Michlik's surrebuttal testimony shows that  
15 Staff is recommending a revenue increase for SaddleBrooke Ranch of \$126,586,  
16 or 108.10%, on a standalone basis. Since consolidation with Oracle will lessen  
17 this impact to customers in SaddleBrooke Ranch it is difficult to understand  
18 Staff's continued rejection of consolidation on the basis of adverse impacts to  
19 SaddleBrooke Ranch customers.

20 **IV. Off-Site Facilities Fee**

21 **Q. HAS THE COMPANY RECONSIDERED ITS OBJECTION TO STAFF'S**  
22 **LOWERING OF THE OFF-SITE FACILITIES FEE?**

23 A. Yes. While I do not respond to Staff's surrebuttal testimony, the Company  
24 accepts Staff's recommendation of an Off-Site Facilities Fee of \$1,500 for new  
25 service connections with a 5/8 X 3/4-inch meter that is graduated for larger meter  
26 sizes.

27 **Q. HAS THE COMPANY PREPARED A REVISED TARIFF THAT**  
28 **INCORPORATES THESE CHANGES?**

1 A. Yes. Attached as Exhibit B is a revised Off-Site Facilities Fee based on the tariff  
2 that was approved in Decision No. 73144 and incorporating the proposed level of  
3 fees recommended by Staff.

4 **Q. DOES THAT CONCLUDE YOUR REJOINDER TESTIMONY?**

5 A. Yes.  
6  
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**EXHIBIT A**

**National Association of Water Companies**

**State Public Utility Commission Staff  
Water Policy Forum**

**SUMMARY REPORT  
December 2010**

**National Association of Water Companies**

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Prepared by  
Lila A. Jaber, Shareholder  
Gunster, Yoakley & Stewart

## EXHIBIT A

### III. 2010 NAWC COMMISSION STAFF WATER POLICY FORUM PARTICIPANTS

Tabatha Blackwell  
Senior Policy Advisor to Dir. Kenneth C. Hill  
Tennessee Regulatory Authority

Sharon Colby Camara  
Chief Financial Analyst  
Rhode Island Division of Public Utilities & Carriers

Paul Foran  
Vice President-Regulatory Programs  
American Water

Gerry Galinato  
Technical Engineer  
Idaho Public Utilities Comm.

Erin Gannon  
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Pennsylvania Office of Consumer Advocate

Walton Hill  
Senior Vice President, Regulatory Relations  
United Water

John Butch Howard  
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South Carolina PSC

Ernest Johnson  
Director  
Arizona Corporation Commission

Edward Kaufman  
Senior Analyst  
Indiana Office of Utility Consumer Counselor

Steve Klick  
Executive Policy Manager to Commissioner Powelson  
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Janet Llewellyn  
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Florida Department of Environmental Protection

Dana Lynn  
Utility Analyst  
Indiana Utility Regulatory Commission

David Monie  
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SB Water Company

Donald Morrissey  
Vice President, Finance and CFO  
Aquarion Water Company

Steve Olea  
Director, Utilities Division  
Arizona Corporation Commission

Philip Oshida  
Deputy Director, Standards and Risk Management  
Division  
Environmental Protection Agency, Office of Ground  
Water and Drinking Water

Todd Osterloh  
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Robert W. Baird & Company

William Richardson  
Advisory Staff  
South Carolina PSC

James Spearman  
Executive Assistant & Sr. Technical Advisor  
South Carolina PSC

Janelle Thomas  
Water Engineer  
Nevada Public Utilities Commission

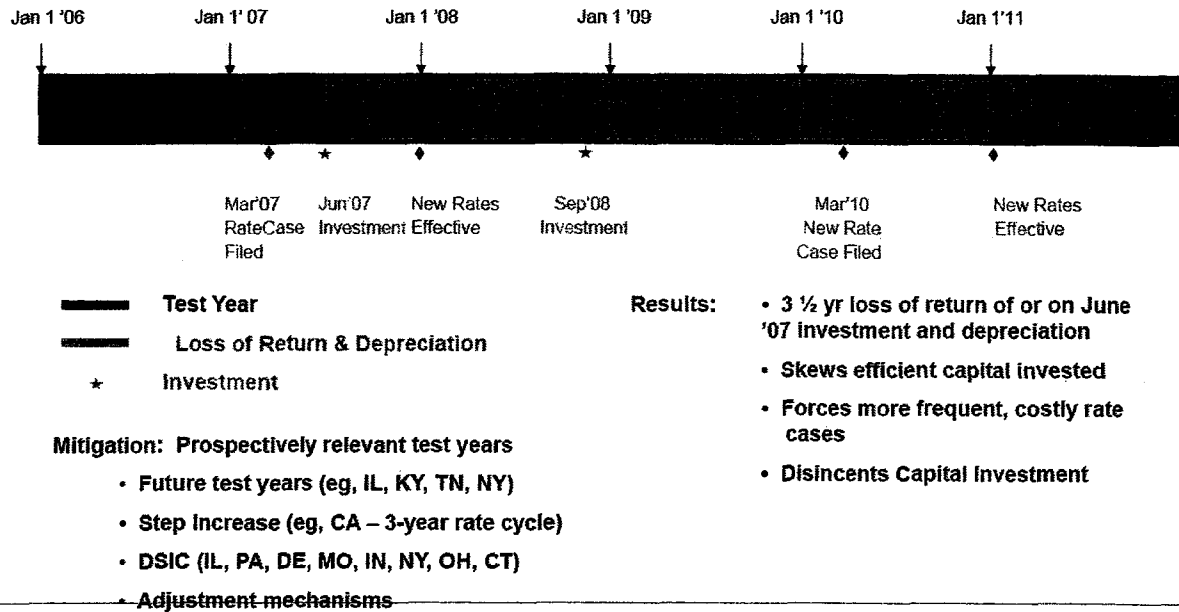
Eric Thornburg  
President & CEO  
The Connecticut Water Company

Marcia B. Thunberg  
Staff Attorney/Hearings Examiner  
New Hampshire PUC

Heidi Wagner  
Public Utility Analyst  
Delaware Public Service Commission

## EXHIBIT A

to process rate cases, commission regulatory policies, such as test years, and extended construction times for major capital projects.



Mr. Foran provided the following as examples of policies that would promote more timely recovery of capital and therefore facilitate capital attraction and investment in the industry.

### 1. Distribution System Investment Charge (DSIC) for Water and Wastewater Systems

Mr. Foran believes that infrastructure surcharges are some of the most successful programs used by states to reduce regulatory lag. Eliminating the need for a full general rate proceeding, the utilities use these surcharges as programs to pass through to customers the revenue requirement associated with a return on (rate of return) and return of (depreciation expense) capital invested to replace water and wastewater infrastructure. Sometimes known as a Distribution System Investment Charge (DSIC) the programs differ from state to state. However, common elements include allowing the utility to begin earning a return on necessary infrastructure replacement outside of a general rate proceeding coupled with limits on the surcharges and some form of reconciliation procedures to protect ratepayers.

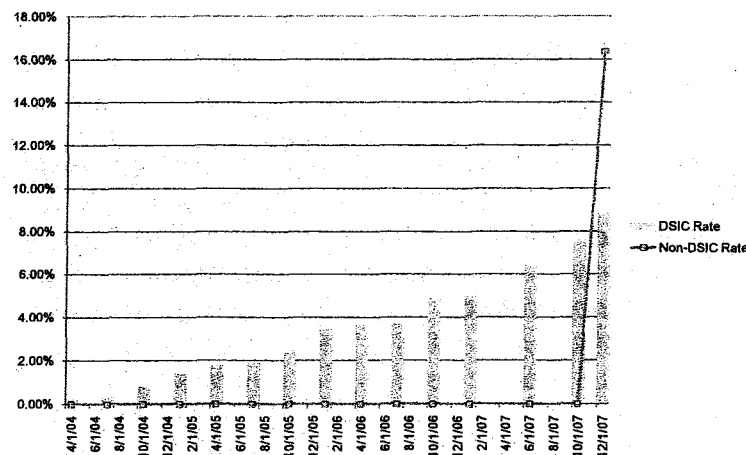
Forum Participant Steve Klick spoke specifically about the DSIC as implemented in Pennsylvania. DSIC was first implemented in Pennsylvania in approximately 1996. Similar programs have now been implemented in at least eight other states (Illinois, Missouri (St. Louis County), Ohio, Delaware, Indiana, New Hampshire, New York and Connecticut) and the California PUC has recently approved a pilot DSIC program. In

## EXHIBIT A

Pennsylvania, Mr. Klick notes that the program has operated for almost 10 years with virtually no known customer complaints. Supporters of the DSIC note that the benefits of the program include more efficient and timely investment of capital, significant progress in replacing aging infrastructure, enhanced service quality, reduction of water lost through leaks, and avoidance of rate shock. As water supplies become more stressed in the future due to many factors, reducing water lost through aging infrastructure become more important. Such programs typically include protections for customers such as limits on the amount of incremental revenues that can be collected, exclusion of capital projects that are revenue producing, and true up mechanisms. Forum Participant Klick outlined the following specific benefits of the DSIC program in Pennsylvania:

- It addresses aging infrastructure that presents water quality problems;
- Proactively addresses main breaks (boil water notices);
- New mains have been installed to eliminate dead ends, that is, it facilitates looping projects;
- Reduces unaccounted for water;
- Replaces fire hydrants and larger pipe for fire flows;
- Provides economic reliability in the community;
- Allows coordination with Departments of Transportation and local government;
- Reduces rate case expense;
- Promotes the acquisition of small and non-viable water systems;
- Allows for proactive planning;
- Accelerates the replacement of aging infrastructure;
- Creates a positive impact on capital attraction; and
- Phase-in cost recovery (gradualism)

### DISC Rate Gradualism



## EXHIBIT B



### ARIZONA WATER COMPANY

#### **TARIFF SCHEDULE – OFF-SITE FACILITIES FEE (WATER)**

Filed by:

Title:

Date of Original Filing:

System(s): **SUPERSTITION (APACHE JUNCTION AND SUPERIOR)**

A.C.C. No.

Cancelling A.C.C. No. N/A

Tariff or Schedule No.

Filed:

Effective:

#### **I. Purpose and Applicability**

The purpose of the off-site facilities fees payable to Arizona Water Company (“the Company”) pursuant to this tariff is to equitably apportion the costs of constructing additional off-site facilities necessary to provide water production, treatment, delivery, storage and pressure among all new service connections. These charges are applicable to all new service connections established after the effective date of this tariff undertaken via Main Extension Agreements or requests for service not requiring a Main Extension Agreement. The charges are one-time charges and are payable as a condition to Company’s establishment of service, as more particularly provided below.

#### **II. Definitions**

Unless the context otherwise requires, the definitions set forth in R-14-2-401 of the Arizona Corporation Commission’s (“Commission”) rules and regulations governing water utilities shall apply in interpreting this tariff schedule.

“Applicant” means any party entering into an agreement with Company for the installation of water facilities to serve new service connections, including Developers and/or Builders of new residential subdivisions and/or commercial and industrial properties.

“CAP Water” means water from the Central Arizona Project provided directly or indirectly to the Company.

“Company” means Arizona Water Company.

“Main Extension Agreement” means any agreement whereby an Applicant agrees to advance the costs of the installation of water facilities necessary for the Company to serve new service connections within a development, or installs such water facilities necessary to serve new service connections and transfer ownership of such water facilities to the Company, which agreement shall require the approval of the Commission pursuant to A.A.C. R-14-2-406, and shall have the same meaning as “Water Facilities Agreement” or “Line Extension Agreement.”

“Off-site Facilities” means water treatment facilities, including treatment of CAP Water and other available water supplies, storage tanks and related appurtenances and equipment necessary for proper operation of such water treatment facilities, including engineering and design costs. Off-site facilities may also include booster pumps, wells for recovery of stored CAP water or other groundwater supplies, pressure tanks, transmission mains and related appurtenances and equipment necessary for proper operation of such facilities if these facilities are not for the exclusive use of the applicant and will benefit the entire water system.



## **ARIZONA WATER COMPANY**

### **OFF-SITE FACILITIES FEE (WATER) (continued)**

“Service Connection” means and includes all service connections for single-family residential or commercial, industrial other uses, regardless of meter size.

### **III. Off-Site Water Facilities Fee**

For each new service connection, the Company shall collect an off-site facilities fee derived from the following table:

<b>OFF-SITE FACILITIES FEE TABLE</b>		
<b>Meter Size</b>	<b>Size Factor</b>	<b>Total Fee</b>
5/8" x 3/4 "	1	\$1,500
3/4"	1.5	\$2,250
1"	2.5	\$3,750
1-1/2 "	5	\$7,500
2"	8	\$12,000
3"	16	\$24,000
4"	25	\$37,500
6" or larger	50	\$75,000

### **IV. Terms and Conditions**

(A) Assessment of One Time Off-Site Facilities Fee: The off-site facilities fee may be assessed only once per parcel, service connection, or lot within a subdivision (similar to meter and service line installation charge). These charges are not applicable to additional service connections that are established as back-up connections, under the condition that these service connections are not to be used at the same time.

(B) Use of Off-Site Facilities Fee: Off-site facilities fees may only be used to pay for capital items of off-site facilities or for repayment of loans obtained to fund the cost of installation of off-site facilities. Off-site facilities fees shall not be used to cover repairs, maintenance, or operational costs. The Company shall record amounts collected under tariff as Contributions in Aid of Construction (“CIAC”); however, such amounts shall not be deducted from rate base until such amounts have been expended for utility plant.

(C) Time of Payment:

- 1) For those requiring a Main Extension Agreement: In the event that the Applicant is required to enter into a Main Extension Agreement, whereby the Applicant agrees to advance the costs of installing mains, valves, fittings, hydrants and other on-site improvements or construct such improvements in order to extend service in accordance with R-14-2-406(B), payment of the off-site facilities fees required hereunder shall be made by the Applicant no



## **ARIZONA WATER COMPANY**

### **OFF-SITE FACILITIES FEE (WATER) (continued)**

later than 15 calendar days after receipt of notification from the Company that the Utilities Division of the Arizona Corporation Commission has approved the Main Extension Agreement in accordance with R-14-2-406(M).

- 2) For those connecting to an existing main: In the event that the Applicant is not required to enter into a Main Extension Agreement, the off-site facilities fee charges hereunder shall be due and payable at the time the meter and service line installation fee is due and payable.

(D) Off-Site Facilities Construction By Developer: Company and Applicant may agree to construction of off-site facilities necessary to serve a particular development by Applicant, which facilities are then conveyed to Company. In that event, Company shall credit the total cost of such off-site facilities as an offset to off-site facilities fees due under this Tariff. If the total cost of the off-site facilities constructed by Applicant and conveyed to Company is less than the applicable off-site facilities fees under this Tariff, Applicant shall pay the remaining amount of off-site facilities fees owed hereunder. If the total cost of the off-site facilities contributed by Applicant and conveyed to Company is more than the applicable off-site facilities fees under this Tariff, Applicant shall be refunded the difference upon acceptance of the off-site facilities by the Company.

(E) Failure to Pay Charges; Delinquent Payments: The Company will not be obligated to make an advance commitment to provide or actually provide water service to any Applicant in the event that the Applicant has not paid in full all charges hereunder. Under no circumstances will the Company set a meter or otherwise allow service to be established if the entire amount of any payment due hereunder has not been paid.

(F) Large Subdivision and/or Development Projects: In the event that the Applicant is engaged in the development of a residential subdivision and/or development containing more than 150 lots, the Company may, in its discretion, agree to payment of off-site facilities fees in installments. Such installments may be based on the residential subdivision and/or development's phasing, and should attempt to equitably apportion the payment of charges hereunder based on the Applicant's construction schedule and water service requirements. In the alternative, the Applicant shall post an irrevocable letter of credit in favor of the Company in a commercially reasonable form, which may be drawn by the Company consistent with the actual or planned construction and hook up schedule for the subdivision and/or development.

(G) Off-Site Facilities Fees Non-refundable: The amounts collected by the Company as off-site facilities fees shall be non-refundable contributions in aid of construction.

(H) Use of Off-Site Facilities Fees Received: All funds collected by the Company as off-site facilities fees shall be deposited into a separate interest bearing bank account and used solely for the purposes of paying for the costs of installation of off-site facilities, including repayment of loans obtained for the installation of off-site facilities that will benefit the entire water system.

(I) Off-Site Facilities Fee in Addition to On-site Facilities: The off-site facilities fee shall be in addition to any costs associated with the construction of on-site facilities under a Main Extension Agreement.



**ARIZONA WATER COMPANY**  
**OFF-SITE FACILITIES FEE (WATER) (continued)**

(J) Disposition of Excess Funds: After all necessary and desirable off-site facilities are constructed utilizing funds collected pursuant to this tariff, or if the off-site facilities fee tariff has been terminated by order of the Arizona Corporation Commission, any funds remaining in the bank account shall be refunded. The manner of the refund shall be determined by the Commission at the time a refund becomes necessary.

(K) Fire Flow Requirements: In the event the Applicant for service has fire flow requirements that require additional facilities not covered by this tariff, such additional facilities shall be constructed under a separate Main Extension Agreement as a non-refundable contribution and shall be in addition to the off-site facilities fees.

(L) Status Reporting Requirements to the Commission: The Company shall submit a calendar year off-site facilities fee status report each January 31<sup>st</sup> to Docket Control for the prior twelve (12) month period, beginning January 31, 2013, until the off-site facilities fee tariff is no longer in effect. This status report shall contain a list of all customers that have paid the off-site facilities fee, the amount each has paid, the physical location/address of the property in respect of which such fee was paid, the amount of money spent from the account, the amount of interest earned on the funds within the tariff account, and a list of all facilities that have been installed with the tariff funds during the 12 month period.



**ARIZONA WATER COMPANY**



**Docket No. W-01445A-11-0310**

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**2011 RATE HEARING**

**For Test Year Ending 12/31/10**

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**PREPARED  
REJOINDER TESTIMONY & EXHIBITS  
OF  
JOEL M. REIKER**

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# ARIZONA WATER COMPANY

## Rejoinder Testimony of Joel M. Reiker

### I. Introduction

Q. PLEASE STATE YOUR NAME, EMPLOYER, AND TITLE.

A. My name is Joel M. Reiker. I am employed by Arizona Water Company (the "Company" or "AWC") as Vice President – Rates and Revenues.

Q. ARE YOU THE SAME JOEL M. REIKER THAT PREVIOUSLY PROVIDED DIRECT AND REBUTTAL TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. HAVE YOU REVIEWED THE SURREBUTTAL TESTIMONY FILED BY THE OTHER PARTIES TO THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY?

A. The purpose of my rejoinder testimony is to respond to the surrebuttal testimony of the Arizona Corporation Commission Utilities Division Staff ("Staff") and the Residential Utility Consumer Office ("RUCO").

Q. HOW IS YOUR REJOINDER TESTIMONY ORGANIZED?

A. My rejoinder testimony is presented in three sections, including this introductory Section I. In Section II, I respond to the surrebuttal testimony of Staff witnesses Michlik and Erdwurm. In Section III, I respond to RUCO witnesses Mease.

### II. Rejoinder to Staff Surrebuttal Testimony

A. Rate Base

*Miami Wells No. 8 & 17*

Q. HAS STAFF CHANGED ITS POSITION ON THE RATEMAKING TREATMENT OF MIAMI WELLS NO. 8 AND 17?

1 A. Yes. Although not explicitly stated, Staff's schedules indicate they have changed  
2 their proposed ratemaking treatment of these two wells. According to page 13  
3 (lines 3 – 4) of Mr. Michlik's direct testimony, "Staff treats [Miami Wells No. 8 and  
4 17] as retired, resulting in removal of the original cost from plant and  
5 accumulated depreciation." Accordingly, Schedule JMM-4 (column B) of Mr.  
6 Michlik's direct testimony reflected the retirement accounting treatment of these  
7 two wells. However, Mr. Michlik's surrebuttal Schedule JMM-4 (column B), which  
8 summarizes Staff's proposed rate base for the Superstition system, only reflects  
9 the removal of the original cost of these wells from Utility Plant in Service  
10 ("UPIS"), with no corresponding adjustment to Accumulated Depreciation. I note,  
11 however, that Mr. Michlik's surrebuttal schedule JMM-5 continues to reflect a  
12 retirement adjustment to Accumulated Depreciation.

13 **Q. WHAT IS THE IMPACT OF STAFF'S ADJUSTMENT ON THE EASTERN**  
14 **GROUP'S REVENUE REQUIREMENT?**

15 A. Assuming retirement treatment of these wells, as Staff recommends in its direct  
16 testimony, the revenue effect in this proceeding is approximately \$1,700.

17 **Q. CAN YOU PUT THE REVENUE EFFECT OF STAFF'S ADJUSTMENT INTO**  
18 **PERSPECTIVE?**

19 A. Yes. Staff recommends a total revenue requirement exceeding \$23 million in this  
20 proceeding. The adjustment Staff proposes has a potential impact on proposed  
21 revenues of approximately 0.0073%. To help put this impact into perspective,  
22 the American Water Works Association's ("AWWA") Manual of Water Supply  
23 Practices M1 states that a correlation of bill count revenue to actual billed  
24 revenue of 3 percent, or less, generally indicates that a bill count is sufficiently  
25 accurate for rate-design purposes. In other words, an un-reconciled difference,  
26 rounding or anomalies in the rate design can have a much larger effect on the  
27 Company's revenues than Staff's adjustment. For example, Staff's new method  
28 of rounding of its recommended cost of debt and capital structure in this

1 proceeding understates the Company's cost of service and revenue requirement  
2 by over \$36,000. This is an issue that, up to this point, has not been raised by  
3 the Company.

4 **Q. ARE YOU SUGGESTING THAT STAFF SHOULD NOT BOTHER MAKING**  
5 **ADJUSTMENTS THAT HAVE SUCH A SMALL EFFECT ON THE REVENUE**  
6 **REQUIREMENT?**

7 A. No. From the Company's perspective, these particular types of plant  
8 adjustments are important to the Company's bookkeeping. It was for this reason  
9 the Company accepted the portion of Staff's adjustment related to the retirement  
10 of Miami Well No. 8. The Company opposes the retirement for ratemaking  
11 purposes of Miami Well No.17 because it is in service, is used and useful, and  
12 does not qualify for retirement treatment. The Company viewed Staff's original  
13 proposed adjustment as more of a bookkeeping matter than anything else.

14 **Q. WHAT IS THE PURPOSE OF CITING THE SIGNIFICANCE OF THE EFFECT**  
15 **OF STAFF'S ADJUSTMENT ON REVENUES?**

16 A. On page 9 (lines 8 – 14) of Mr. Michlik's surrebuttal testimony, Staff characterizes  
17 the Company's position as "asymmetrical" and suggests that rate base be  
18 reduced to reflect any plant items that were retired in 2011. Accordingly, on  
19 May 8, 2012, seven days before the scheduled date of hearings in this  
20 proceeding, Staff served the Company with a discovery request asking for a  
21 significant amount of data related to its 2011 plant entries. The Company will  
22 provide the data Staff requests. However, given the cumulative impact on the  
23 revenue requirement of Staff's adjustment, various un-reconciled differences and  
24 Staff's proposed rounding of the Company's cost of capital mentioned above, a  
25 more precise estimate of the amount of capital to be supplied by the Company's  
26 investors, and ultimately the cost of providing utility service during the period new  
27 rates are in effect, is not likely to result. This is important given Mr. Michlik's  
28

statement, on page 17 (lines 17 – 19) of his surrebuttal testimony, that the processing of this case has placed an additional burden upon Staff.

**B. Income Statement**

**Fleet Fuel Expenses**

**Q. DOES THE COMPANY ACCEPT STAFF'S ADJUSTMENT TO FLEET FUEL EXPENSES?**

A. No. The Company's adjusted Test Year fleet fuel expenses reflect an average cost of gasoline of \$3.671 per gallon. Staff's Income Statement Adjustment No. 2 would decrease the Company's adjusted Test Year fleet fuel expenses to a level which reflects an average cost of gasoline of \$3.47 per gallon. The average price of gasoline in Arizona is currently \$3.804 per gallon.

**Q. DID THE COMPANY ACCEPT STAFF'S PROPOSED FLEET FUEL ADJUSTMENT IN ITS RECENT WESTERN GROUP RATE CASE (DOCKET NO. 10-0517), AS MR. MICHLIK CLAIMS ON PAGE 10 (LINES 1 – 4) OF HIS SURREBUTTAL TESTIMONY?**

A. Yes. However, contrary to Mr. Michlik's claim on page 10 (lines 7 – 13) of his surrebuttal testimony, accepting Staff's adjustment in Docket No. 10-0517 did not benefit the Company in that proceeding. Nor is the Company's method of recognizing the per-gallon cost of gasoline in this proceeding inconsistent with the previous case.

**Q. WHY DID THE COMPANY ACCEPT STAFF'S ADJUSTMENT IN THE WESTERN GROUP RATE CASE?**

A. The Company accepted Staff's adjustment in the Western Group rate case because at the time Staff proposed its fleet fuel adjustment in that proceeding, the average price of gasoline was lower than that reflected in the Company's adjusted Test Year expenses. Accordingly, the Company accepted Staff's proposed adjustment to reduce operating expenses by approximately \$25,000 in that proceeding. Since that time, both the spot price of gasoline and the

1 12-month average price calculated by Staff have increased to levels higher than  
2 that proposed by any party to that proceeding. Clearly, the Company did not  
3 benefit by accepting Staff's fleet fuel adjustment in Docket No. W-01445A-10-  
4 0517, as the Company is currently incurring fuel costs in its Western Group that  
5 are higher than the cost currently reflected in rates.

6 In this proceeding, the per-gallon price of gasoline is currently higher than  
7 that reflected in any of the parties' proposed fleet fuel adjustments, suggesting  
8 that the price of fuel reflected in the Eastern Group's rates, like the Western  
9 Group, will be lower than cost. The Company cannot accept an adjustment  
10 reflecting a per-gallon price of gasoline of \$3.47, as proposed by Staff, when the  
11 current cost is higher than the price reflected in the Company's own fleet fuel  
12 adjustment (\$3.67 per gallon).

13 **Q. DOES THE COMPANY'S ADJUSTMENT ASSUME THAT PRICES WILL**  
14 **REMAIN AT PEAK LEVELS, AS MR. MICHLIK CLAIMS ON PAGE 11 (LINES**  
15 **1 – 4) OF HIS SURREBUTTAL TESTIMONY?**

16 **A.** No. As stated above, the Company's fleet fuel adjustment is based on a price of  
17 gasoline of \$3.67 per gallon. The average price of gasoline in Arizona is  
18 currently \$3.804 per gallon.

19 **Q. ARE GASOLINE PRICES TRENDING DOWNWARD AS CLAIMED BY MR.**  
20 **MICHLIK?**

21 **A.** No. In the Western Group rate case Staff calculated a 12-month average price of  
22 gasoline of \$3.31 per gallon. On page 19 (lines 13 – 14) of Mr. Michlik's direct  
23 testimony, Staff calculated a 12-month average price of gasoline of \$3.38 per  
24 gallon. On page 11 (lines 24 – 25) of Mr. Michlik's surrebuttal testimony, Staff  
25 calculates a 12-month average price of gasoline of \$3.47. Thus, in terms of both  
26 12-month average prices and current prices relative to the Company's proposed  
27 adjustment, gasoline prices are increasing.

*Maintenance Expense*

**Q. HOW DO YOU RESPOND TO STAFF'S CLAIM, ON PAGE 13 (LINES 13 – 19) OF MR. MICHLIK'S SURREBUTTAL TESTIMONY, THAT THE REGRESSION STATISTICS UPON WHICH THE COMPANY'S TRANSMISSION & DISTRIBUTION ("T&D") MAINTENANCE EXPENSE ADJUSTMENTS ARE BASED ARE NEITHER STATISTICALLY SIGNIFICANT NOR ROBUST?**

**A.** I explained on page 18 (lines 11 – 17) of my rebuttal testimony that the regression analysis performed by the Company for the purpose of normalizing these expenses is a conservative analysis in that it examines all years from 2000 through 2010. That analysis includes the years 2008 through 2010, in which the Company implemented significant cost cutting measures resulting in abnormally low levels of maintenance expenses. The effect of including these abnormally low years in a regression analysis is an understatement of the real impact of the long-term trend, as well as a reduction in the statistical significance of the analysis. If one were to exclude these abnormal years from the analysis, the statistical significance (i.e. the strength of the relationship between the variables) and, consequently, the normalized levels of T&D maintenance expenses, would both increase. For example, a regression analysis of Eastern Group T&D maintenance expenses incurred during the years 2000 through 2007 produces regression coefficients that are larger and more statistically significant than those relied upon by the Company in normalizing these expenses, as shown in the following table:



	<u>2000 – 2010 Regression</u>			<u>2000 – 2007 Regression</u>		
	Coefficient	t-Stat	Statistically Significant?	Coefficient	t-Stat	Statistically Significant?
Superstition	\$41,367	3.71	yes	\$75,426	13.25	yes
Cochise	9,651	2.20	no	20,494	3.91	yes
San Manuel	-25	-0.02	no	2,584	1.82	no
Oracle	2,236	1.80	no	5,669	4.70	yes
SaddleBrooke <sup>1</sup>	373	4.09	yes	n/a	n/a	n/a
Winkelman	417	1.97	no	1,028	6.39	yes

The results shown above are consistent with the chart of total-Company T&D maintenance expenses from 1991 through 2007 illustrating the long-term increasing trend present in these costs, shown on page 17 of my rebuttal testimony. The regression coefficients produced by analyses of the T&D maintenance costs reflected in that chart during varying time periods are all statistically significant and therefore robust, as shown below:

Time Period of Regression	Coefficient	t-Stat	Statistically Significant?
2005 – 2007	\$344,914	8.79	yes
2003 – 2007	318,891	24.90	yes
2001 – 2007	271,192	14.21	yes
1998 – 2007	208,453	10.93	yes
1993 – 2007	149,849	11.11	yes
1991 – 2007	140,829	12.82	yes

Unfortunately, Staff continues to focus on the statistical significance of regression analyses which are largely influenced by years in which the levels of maintenance expenses were abnormally low, thus leading to the erroneous conclusion that infrastructure-related costs do not increase over time.

*Rate Case Expense*

<sup>1</sup> No data available prior to 2007.

1 Q. HOW DO YOU RESPOND TO STAFF'S SURREBUTTAL TESTIMONY  
2 REGARDING RATE CASE EXPENSE?

3 A. The tenor of Mr. Michlik's surrebuttal testimony suggests that Staff is less  
4 concerned with recommending an appropriate level of rate case expense in this  
5 proceeding than it is with expressing its displeasure with the Company for having  
6 filed a rate case for the Eastern Group. On page 17 (lines 17 – 19) of Mr.  
7 Michlik's surrebuttal testimony, Staff claims that the Company's choice to file  
8 separate rate cases for its Western and Eastern Groups has placed additional  
9 burden on Staff, RUCO, the Hearing Division, the Commission and the  
10 Company. To the contrary, the filing of individual groups, rather than a total  
11 Company or multi-group filing, has provided all parties with a more manageable  
12 and administratively efficient rate case. Ironically, it was the additional burden of  
13 having to process a total Company rate case with limited resources that led Staff  
14 to seek a 90-day extension of the normal time clock in the Company's 2007 Test  
15 Year rate proceeding in Docket No. W-01445A-08-0440.<sup>2</sup> No similar request has  
16 been made in this proceeding.

17 C. Rate Design

18 Q. DO YOU HAVE ANY COMMENT ON EITHER OF STAFF'S TWO  
19 ALTERNATIVE RATE DESIGN PROPOSALS?

20 A. Yes. On pages 37 (lines 15 – 28) and 38 (lines 1 – 2) of my rebuttal testimony, I  
21 stated the Company's concerns with Staff's original proposed rate design, as it  
22 allocated only 41% of the overall revenue requirement to the fixed basic service  
23 charge. In Staff's surrebuttal testimony, Mr. Erdwurm presents an alternative rate  
24 design ("Alternative 2") which allocates approximately 47% of revenues to the  
25 fixed basic service charge. Of Staff's two rate design proposals, the Company  
26  
27

28 <sup>2</sup> See November 4, 2008 Procedural Order in Docket No. W-01445A-08-0440.

generally prefers Alternative 2. However, the Company requests that the Commission adopt the Company's proposed consolidation and rate design.

**Q. DO YOU HAVE ANY COMMENT ON STAFF'S TESTIMONY REGARDING RATE CONSOLIDATION?**

A. Yes. The Company believes that, at a minimum, the Oracle and SaddleBrooke Ranch systems should be fully consolidated in this proceeding, as these two systems are currently physically interconnected and constitute a single public water system. Further, the relative magnitude of the required revenue increases in these systems suggests that full rate consolidation is appropriate at this time, so as to alleviate the impact to customers in SaddleBrooke Ranch.

**Q. ON PAGE 4 (LINES 1 – 3) OF HIS SURREBUTTAL TESTIMONY, MR. ERDWURM STATES THAT CUSTOMERS IN SADDLEBROOKE RANCH WOULD BE ADVERSELY IMPACTED UNDER RATE CONSOLIDATION. DO YOU AGREE?**

A. No. Both of Staff's alternative rate designs contain errors which can lead to the incorrect conclusion that customers in SaddleBrooke Ranch would be adversely impacted under rate consolidation. Specifically, the rates proposed by Staff for SaddleBrooke Ranch under their Alternative 1 and Alternative 2 fall short of Staff's proposed revenue requirement by approximately \$69,000 (28.4%) and \$75,000 (30.7%), respectively (See Exhibit JMR-RJ1). Given Staff's proposed required revenue increases for Oracle and SaddleBrooke Ranch of 2.4% and 108.1%, respectively, it certainly makes sense to fully consolidate these systems at this time.

**III. Rejoinder to RUCO Surrebuttal Testimony**

A. Rate Base

*Cash Working Capital*

**Q. DOES THE COMPANY ACCEPT RUCO'S ADJUSTMENT TO WORKING CASH?**

1 A. No. The Company continues to oppose RUCO's working cash adjustment for the  
2 reasons stated in Section II of my rebuttal testimony.

3 B. Income Statement

4 Maintenance Expense

5 Q. HOW DO YOU RESPOND TO MR. MEASE'S SUGGESTION ON PAGE 18  
6 (LINES 14 – 17) OF HIS SURREBUTTAL TESTIMONY THAT THE CHART  
7 DEPICTING T&D MAINTENANCE EXPENSES PER CUSTOMER OVER TIME  
8 PROVIDED ON PAGE 17 OF YOUR REBUTTAL TESTIMONY COULD  
9 INDICATE THAT T&D MAINTENANCE EXPENSES ARE CYCLIC IN  
10 NATURE?

11 A. As stated above, a regression analysis of the Company's T&D maintenance  
12 expenses from 1991 through 2007 demonstrates that the same expenses  
13 depicted on a per-customer basis in the chart shown on page 17 of my rebuttal  
14 testimony reflect a statistically significant increase in these costs over time.  
15 These results are robust, and include any effect that the temporary reductions in  
16 T&D maintenance expenses occurring between 1996 and 1999 may have on the  
17 regression coefficients and their statistical significance. In other words, the  
18 regression analysis, like the one performed by the Company for the purpose of  
19 normalizing its maintenance expenses, takes these years into account.  
20 However, the results still indicate a statistically significant pattern of increasing  
21 maintenance costs over time.

22 Q. HAS RUCO WITHDRAWN ITS ADJUSTMENT TO NORMALIZE THESE  
23 EXPENSES IN ITS SURREBUTTAL TESTIMONY?

24 A. Yes. On page 21 (lines 8 – 10) of Mr. Mease's direct testimony he recognized  
25 the fact that there have been significant reductions in these expenses during the  
26 years 2008, 2009 and 2010. He went on (lines 13 – 14) to state that RUCO had  
27 "reviewed the justification for normalizing these expenses and performed its own  
28 [normalizing] calculations." Now, on page 20 (lines 5 – 10) of his surrebuttal

1 testimony, Mr. Mease states that RUCO no longer believes a normalizing  
2 adjustment is appropriate based on a review of the outputs from the Company's  
3 regression analysis coupled with historical information and testimony provided by  
4 the Company.

5 **Q. HOW DO YOU RESPOND?**

6 A. The fact that the Test Year levels of these expenses were abnormally low and  
7 warrant a normalizing adjustment has not changed. RUCO has apparently  
8 chosen to withdraw its own normalizing adjustment, which was based on an  
9 entirely different methodology than the Company's normalizing adjustment,  
10 because RUCO disagrees with the Company's methodology. RUCO's reason for  
11 reversing its adjustment is illogical, as nothing about the nature or level of the  
12 Company's Test Year maintenance expenses has changed since the time RUCO  
13 filed its direct testimony.

14 *Rate Case Expense*

15 **Q. DO YOU HAVE ANY COMMENT ON RUCO'S SURREBUTTAL TESTIMONY**  
16 **REGARDING RATE CASE EXPENSE?**

17 A. Yes. On page 20 (lines 18 – 20) of his surrebuttal testimony Mr. Mease states  
18 that both the Company and RUCO recommend a four-year recovery period for  
19 rate case expense when, in fact, the Company has proposed that rate case  
20 expense be recovered over a three-year period. Further, according page 22  
21 (lines 6 – 8) of Mr. Mease's direct testimony, RUCO also proposes a three-year  
22 recovery period for rate case expense. The Company believes that this  
23 discrepancy may only be a typographical error.

24 *C. Rate Design*

25 **Q. ARE THE COMPANY AND RUCO IN GENERAL AGREEMENT WITH**  
26 **RESPECT TO RATE DESIGN?**

27 A. Yes. With the exception of the issue of declining usage discussed on page 41  
28 (lines 4 – 19) of my rebuttal testimony, RUCO continues to incorporate each of

1 the Company's rate design principles discussed in Section VI of my direct  
2 testimony.

3 **Q. DOES THAT CONCLUDE YOUR REJOINDER TESTIMONY?**

4 **A. Yes**

**JMR-RJ1**

**ARIZONA WATER COMPANY**  
Test Year Ended December 31, 2010  
Summary of Revenues by Customer  
Classification - Present & Proposed Rates

**STAFF - ALTERNATIVE 1**

Line No.	Customer Classification	Oracle				SaddleBrooke Ranch			
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
		Staff - Surebital							
		Test Year Rates	Proposed Rates	Proposed Increase Amount	%	Test Year Rates	Proposed Rates	Proposed Increase Amount	%
1	Residential	\$ 801,039	\$ 810,585	\$ 9,546	1.19%	\$ 45,127	\$ 52,328	\$ 7,200	15.96%
2	Commercial	156,439	175,422	18,984	12.13%	61,277	103,784	42,507	69.37%
3	Industrial	-	-	-	0.00%	-	-	-	0.00%
4	Private Fire Service	283	324	41	14.36%	85	459	374	440.00%
5	Other Water Revenues	19,841	21,188	1,347	6.79%	9,032	16,395	7,363	81.52%
6	Total Water Revenues	\$ 977,602	\$ 1,007,519	\$ 29,918	3.06%	\$ 115,521	\$ 172,965	\$ 57,445	49.73%
7	Miscellaneous Revenues	12,494	12,494	-	0.00%	1,582	1,582	-	0.00%
8	Total Operating Revenues	\$ 990,095	\$ 1,020,013	\$ 29,918	3.02%	\$ 117,103	\$ 174,547	\$ 57,445	49.05%
9	Target Revenue Requirement (Mitchlik Surr., Sch. JMM-1)		\$ 1,013,773				\$ 243,889		
10	Difference (Ln. 14 - Ln. 25)		\$ 6,240				\$ (69,142)		
11	Less: Consolidated Revenue Adjustment		-				-		
12	Over/(Short)		\$ 6,240				\$ (69,142)		
13	%		0.62%				-28.37%		

Supporting Schedules:

N:\2011\_Rate\_Cases\Schedules\Eastern Group\2011 EG Rate Case Model STAFF SURREBUTAL SCHEDULES - ALT 1.xlsx  
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Recap Schedules:

JMR-RJ1



**ARIZONA WATER COMPANY**  
 Test Year Ended December 31, 2010  
 Summary of Revenues by Customer  
 Classification - Present & Proposed Rates

**STAFF - ALTERNATIVE 2**

Line No.	Customer Classification	Oracle				SaddleBrooke Ranch			
		[A]	[B]	[C]	[D]	[E]	[F]	[G]	[H]
		Staff - Surrebutal				Staff - Surrebutal			
		Test Year Rates	Proposed Rates	Proposed Increase Amount	%	Test Year Rates	Proposed Rates	Proposed Increase Amount	%
1	Residential	\$ 801,039	\$ 821,882	\$ 20,843	2.60%	\$ 45,127	\$ 54,818	\$ 9,691	21.47%
2	Commercial	156,439	170,045	13,606	8.70%	61,277	97,043	35,766	58.37%
3	Industrial	-	-	-	0.00%	-	-	-	0.00%
4	Private Fire Service	283	324	41	14.36%	85	459	374	440.00%
5	Other Water Revenues	19,841	21,300	1,460	7.36%	9,032	14,935	5,903	65.36%
6									
7									
8									
9	Total Water Revenues	\$ 977,602	\$ 1,013,551	\$ 35,949	3.68%	\$ 115,521	\$ 167,255	\$ 51,734	44.78%
10									
11	Miscellaneous Revenues	12,494	12,494	-	0.00%	1,582	1,582	-	0.00%
12									
13	Total Operating Revenues	\$ 990,095	\$ 1,026,044	\$ 35,949	3.63%	\$ 117,103	\$ 168,837	\$ 51,734	44.18%
14									
15									
16									
17	Target Revenue Requirement (Michlik Surf., Sch. JMM-1)		1,013,773				243,689		
18	Difference (Ln. 14 - Ln. 25)		\$ 12,271				\$ (74,852)		
19	Less: Consolidated Revenue Adjustment		-				-		
20	Over/(Short)		\$ 12,271				\$ (74,852)		
21	%		1.21%				-30.72%		

Supporting Schedules:

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Recap Schedules:

JMR-RJ1

**ARIZONA WATER COMPANY**



**Docket No. W-01445A-11-0310**

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**2011 RATE HEARING**

**For Test Year Ending 12/31/10**

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**PREPARED  
REJOINDER TESTIMONY & EXHIBITS  
OF  
FREDRICK K. SCHNEIDER**

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**ARIZONA WATER COMPANY**

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**Rejoinder Testimony of  
Fredrick K. Schneider**

**I. Introduction and Purpose of Testimony**

**Q. PLEASE STATE YOUR NAME, EMPLOYER, AND OCCUPATION?**

A. My name is Fredrick K. Schneider. I am employed by Arizona Water Company (the "Company") as Vice President of Engineering.

**Q. ARE YOU THE SAME FREDRICK K. SCHNEIDER THAT PREVIOUSLY PROVIDED DIRECT AND REBUTTAL TESTIMONY IN THIS MATTER?**

A. Yes.

**Q. HAVE YOU REVIEWED THE SURREBUTTAL TESTIMONY FILED BY THE OTHER PARTIES TO THIS PROCEEDING?**

A. Yes, I have reviewed the testimony of each of the witnesses of the Commission's Utilities Division Staff ("Staff") and the Residential Utility Consumer Office ("RUCO").

**Q. WHAT IS THE PURPOSE AND EXTENT OF YOUR REJOINDER TESTIMONY?**

A. The purpose of my rejoinder testimony is to respond to the surrebuttal testimony of Staff witnesses Katrin Stukov and Jeffrey M. Michlik, and RUCO witness William A. Rigsby.

**Q. HOW IS YOUR TESTIMONY ORGANIZED?**

A. My rejoinder testimony is presented in five sections including this introductory Section I. In Section II, I present the Company's response to Staff witness Mr. Michlik and RUCO witness Mr. Rigsby, specifically related to the Company's need to maintain adequate Pumping and Transmission and Distribution Maintenance ("Pumping and T&D Maintenance") expenses to provide the

1 required and necessary system maintenance. In Section III, I respond to Staff  
2 witness Mr. Michlik, and RUCO witness Mr. Rigsby, specifically related to the  
3 extraordinary utility plant investments necessary to replace old and failing water  
4 mains and service lines required to reduce and maintain water losses below 10  
5 percent pursuant to the Commission's order in Decision No. 71845. In Section  
6 IV, I respond to Staff witness Mr. Michlik, related to his recommendation that the  
7 Company retire certain in service utility plant in the Superstition system. In  
8 Section V, I respond to Staff witnesses Ms. Stukov and Mr. Michlik, related to  
9 their recommended reduction in the Company's proposed off-site facilities fee.

10 **Q. ARE YOU SPONSORING ANY EXHIBITS WITH YOUR REBUTTAL**  
11 **TESTIMONY?**

12 **A.** No.

13 **II. Pumping and Transmission and Distribution Maintenance Expense**

14 **Q. DO YOU AGREE WITH STAFF WITNESS MICHLIK'S AND RUCO WITNESS**  
15 **RIGSBY'S RECOMMENDATION THAT THE COMPANY'S PRO FORMA**  
16 **ADJUSTMENT TO PUMPING AND T&D MAINTENANCE EXPENSES BE**  
17 **REMOVED?**

18 **A.** No. Test Year levels of Pumping and T&D maintenance expenses were  
19 abnormally low and are not representative of the level of costs that would be  
20 prudently incurred going forward. As a result, these expenses need to be  
21 normalized to reflect the increased cost of such expenses. This is especially  
22 important where the Company is planning to embark on an aggressive  
23 infrastructure replacement program with the Commission's approval of the  
24 Company's proposed DSIC but cannot ignore the need to maintain aging  
25 infrastructure until replacement can be made.

26 **Q. DO STAFF AND RUCO AGREE THAT THE COMPANY SHOULD NOT**  
27 **POSTPONE MAINTENANCE INDEFINITELY?**

1 A. Yes. The parties are in agreement that continuing temporary cost-cutting  
2 measures indefinitely will lead to long-term maintenance problems including  
3 premature pump and motor repairs, loss of water system efficiency and  
4 increases in lost and unaccounted for water.

5 **Q. IF THE PUMPING AND T&D MAINTENANCE EXPENSES ARE REDUCED TO**  
6 **THE LEVELS SUGGESTED BY STAFF AND RUCO, WILL THE COMPANY**  
7 **HAVE SUFFICIENT FUNDS BUILT IN TO RATES TO PERFORM THE**  
8 **REQUIRED MAINTENANCE?**

9 A. No. Their proposed expenses are too low. Pumping and T&D maintenance  
10 expenses should be restored to normal levels as provided for in section II and III  
11 of Mr. Reiker's rejoinder testimony.

12 **Q. DO STAFF, RUCO AND THE COMPANY AGREE ON THE IMPORTANCE OF**  
13 **PERFORMING THIS MAINTENANCE?**

14 A. Yes. However, Staff's and RUCO's recommendations to remove the Company's  
15 proposed pro forma adjustment to normalize Pumping and T&D Maintenance  
16 expenses fails to recognize the fact that the Company cannot continue reduced  
17 levels of maintenance without experiencing continued leaks, main breaks, and  
18 water losses. Again, short-term reductions in Pumping and T&D Maintenance  
19 cannot be continued. Pumping and T&D Maintenance expenses need to be  
20 normalized for the Company to be able to perform all required maintenance, not  
21 just emergency maintenance, on a normal schedule.

22 **Q. IS RESTORING T&D MAINTENANCE EXPENSES TO HISTORICAL LEVELS**  
23 **NECESSARY TO COMPLY WITH THE COMMISSION'S MANDATE ON**  
24 **WATER LOSS?**

25 A. Yes. The Company needs to increase T&D Maintenance efforts and expenses to  
26 reduce water loss and maintain reliable service for its Eastern Group of water  
27 systems.

1 **III. Water Loss and the Company's Proposed Distribution System**  
2 **Improvement Charge ("DSIC")**

3 **Q. DOES THE COMPANY AGREE WITH STAFF'S AND RUCO'S**  
4 **RECOMMENDATION THAT THE COMMISSION DENY THE DSIC?**

5 A. No. The Company's 91-page detailed report, "Water Loss Reduction Program  
6 for Water Systems in the Eastern Group", provided extensive evidence of the  
7 Company's efforts to manage and reduce water loss. RUCO's witness Mr.  
8 Rigsby states on page 3, line 6, of his surrebuttal testimony that the Company  
9 has provided "voluminous testimony" to support its case. RUCO does not  
10 dispute the need to replace this aging infrastructure.

11 The Eastern Group water systems have water mains which were installed  
12 as early as 1906 and have been in service for more than 100 years. There have  
13 been numerous studies completed by various agencies, associations and  
14 universities which have quantified the looming aging infrastructure problem the  
15 United States water industry is facing and the Company has cited nearly a dozen  
16 on this matter. Many more studies exist confirming the looming aging  
17 infrastructure problem.

18 Company witnesses Mr. Harris and Ms. Ahern further discuss the need for  
19 the Commission to approve a DSIC in this case.

20 **Q. HAS STAFF DETERMINED THAT THE COMPANY'S 3-YEAR REPLACEMENT**  
21 **PLAN IS REASONABLE AND APPROPRIATE?**

22 A. Yes.

23 **Q. WHAT RECOMMENDATION DOES STAFF MAKE REGARDING THE**  
24 **COMPANY'S AGING INFRASTRUCTURE REPLACEMENT PLAN?**

25 A. Staff recommends that the Company repair any leak as soon as it is discovered  
26 and implement its aging infrastructure replacement plan.

1 Q. HAS STAFF AND RUCO RECOMMENDED CONDITIONS BE PLACED ON  
2 THE DISC IN THE EVENT THE COMMISSION WERE TO APPROVE SUCH A  
3 MECHANISM?

4 A. Yes. Mr. Harris will provide testimony on most of these conditions. I provide  
5 rejoinder testimony addressing Staff's and RUCO's recommendation to eliminate  
6 the Superior and Apache Junction water systems from the DISC program.

7 Q. WHY SHOULD THE SUPERIOR WATER SYSTEM BE INCLUDED IN THE  
8 DISC PROGRAM?

9 A. Historically, the Superior water system has had water loss in excess of ten  
10 percent and, for a number of years, water loss was greater than 15 percent. For  
11 the year ending 2009, water loss reported to the Arizona Department of Water  
12 Resources ("ADWR") was 10.39 percent. A few years earlier, water loss was  
13 14.40 percent. With the Company's increased efforts utilizing its leak detection  
14 equipment, increased monitoring of the 23-mile long transmission pipeline and  
15 temporary increases in construction water sales, water loss is currently less than  
16 10 percent. However, the Superior water system has a large percentage of old  
17 and failing mains and services that are prone to failure. Ignoring this problem  
18 simply because water loss at this moment in time is less than 10 percent will  
19 delay the benefits of starting to replace this infrastructure now.

20 Q. WHY DID STAFF AND RUCO EXCLUDE SUPERIOR FROM THE DISC?

21 A. It appears they excluded the Superior water system because its water loss for  
22 2010 was calculated at 9.77 percent.

23 Q. IF WATER LOSS IN SUPERIOR WAS 0.25 PERCENT GREATER, WOULD IT  
24 HAVE BEEN INCLUDED?

25 A. Yes. According to Staff and RUCO's recommendation, it would have been  
26 included in their proposed DSIC. If the Superior water system experienced  
27 slightly less sales in 2010, water loss in that system would have been over 10  
28 percent. I doubt Staff and RUCO want to encourage a utility to allow its water

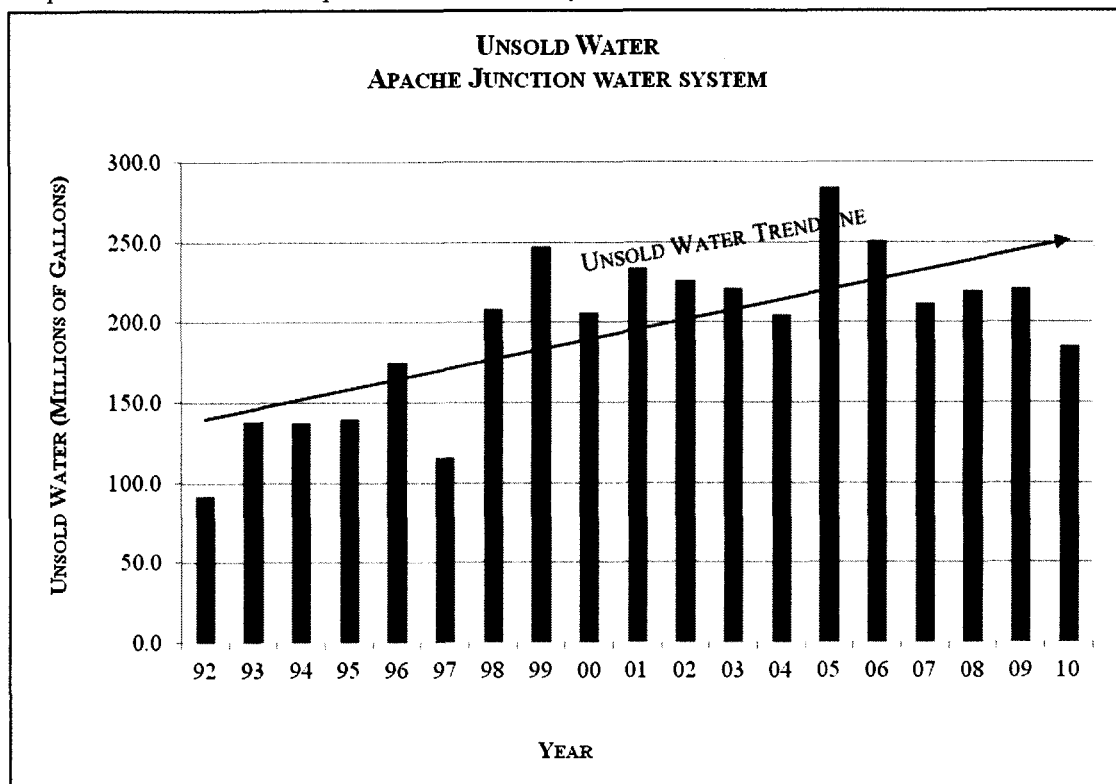


loss to a point exceeding 10 percent with the purpose of becoming eligible for a DISC. This approach would seem counter intuitive to proper water loss management.

**Q. WHY SHOULD THE APACHE JUNCTION WATER SYSTEM BE INCLUDED IN THE DISC PROGRAM?**

A. The Company's evidence shows that aging water mains and services in that system have increasingly begun to fail and need to be replaced. In addition, as shown in the graph below the volume of water loss has been trending upward, although water loss is currently under 10 percent. Because the DSIC program proposed by the Company will only begin to replace the aging and failing water main and service line infrastructure, not totally replace such infrastructure, it is critical to include this system in the program to avoid an even bigger problem in the future.

*Graph 5-10 Unsold Water - Apache Junction water system*



From the graph above, the volume of unsold water in the Apache Junction water system has been greater than 200 million gallons for thirteen of the fourteen

1 years between 1998 and 2011. In 2005 and 2006, unsold water exceeded 250  
2 million gallons, annually.

3 **Q. HOW DOES THE VOLUME OF UNSOLD WATER IN APACHE JUNCTION**  
4 **COMPARE TO WATER LOSS IN THE COMPANY'S OTHER EASTERN**  
5 **GROUP WATER SYSTEMS IN WHICH WATER LOSS IS GREATER THAN**  
6 **TEN PERCENT?**

7 A. Most recently, in 2011 the Apache Junction water system experienced more  
8 unsold water (approximately 205,000,000 gallons) than the volume of water loss  
9 in the Superior, Miami, Oracle and Bisbee water systems combined  
10 (approximately 133,000,000 gallons) and nearly double the annual volume lost  
11 by those systems in 2005 and 2006. Water loss in the Apache Junction water  
12 system is significant and coupled with increasing failures of infrastructure,  
13 warrants inclusion in a DISC program as the Company is proposing in this rate  
14 application.

15 **Q. WHAT HAS THE COMPANY DONE TO DOCUMENT THE OLD AND FAILING**  
16 **MAINS AND SERVICES IN THE APACHE JUNCTION WATER SYSTEM?**

17 A. The Company prepared a 91-page detailed report titled, "Water Loss Reduction  
18 Program for Water Systems in the Eastern Group", included in the Company's  
19 direct testimony as Exhibit FKS-13, which provided extensive evidence of the  
20 Company's efforts to manage and reduce water loss. More importantly, this  
21 report provided very specific and detailed short and long-term plans to replace  
22 the Superstition (including the Apache Junction and Superior water systems),  
23 Bisbee and Oracle water systems aging and failing water mains and service  
24 lines. Neither Staff nor RUCO dispute the need or the engineering estimates of  
25 cost to replace this aging infrastructure. In fact, Staff applies the Company's  
26 engineering estimates of cost in its recommendation.

1 Q. HOW HAS THE COMPANY BEEN ABLE TO MAINTAIN WATER LOSS IN THE  
2 APACHE JUNCTION WATER SYSTEM AT A LEVEL LESS THAN 10  
3 PERCENT?

4 A. Through the use and implementation of the Company's leak detection equipment.  
5 However, as discussed in detail within Exhibit FKS-13, although water loss for  
6 the Apache Junction water system is currently less than 10 percent, water loss  
7 has been increasing in volume. It is because of the overall increase in the  
8 number of customers and individual customer demand that the percentage of  
9 water loss has not exceeded 10 percent. The tremendous amount of customer  
10 growth (10,500 new service connections) between 1995 and 2005 has caused  
11 overall sales to double during this time period, offsetting and driving down the  
12 percentage of water loss.

13 IV. Utility Plant Pro Forma Adjustments

14 Q. DOES THE COMPANY ACCEPT STAFF'S RECOMMENDATION TO RETIRE  
15 MIAMI WELL NO. 17?

16 A. No.

17 Q. IS MIAMI WELL NO. 17 CURRENTLY IN SERVICE?

18 A. Yes. Miami Well No. 17 is in service and providing water service to the  
19 Company's Miami customers.

20 Q. WAS MIAMI WELL NO. 17 IN SERVICE DURING THE RATE CASE  
21 APPLICATION PERIOD?

22 A. Yes.

23 Q. WHY SHOULD THE MIAMI WELL NO. 17 BE INCLUDED IN THIS RATE  
24 APPLICATION?

25 A. In addition to the fact that the Miami Well No. 17 was in service during the current  
26 rate period and is now in service, it makes no sense to remove the well from rate  
27 base or retire the well from service when the well is actually in service.

28 Q. IS MIAMI WELL NO. 17 USED AND USEFUL?

1 A. Yes.

2 Q. ARE UTILITY PLANT ADDITIONS TYPICALLY REMOVED FROM RATE  
3 BASE WHEN THE UTILITY PLANT IS TEMPORARILY OUT OF SERVICE FOR  
4 REPAIRS AND MAINTENANCE?

5 A. No.

6 Q. DOES RUCO AGREE WITH THE COMPANY ON ACCEPTANCE OF MIAMI  
7 WELL NO. 17 IN RATE BASE?

8 A. Yes. RUCO agrees with the Company.

9 V. Off-Site Facilities Fee

10 Q. DOES THE COMPANY ACCEPT STAFF AND RUCO'S RECOMMENDED OFF-  
11 SITE FACILITIES FEE OF \$1,500 FOR A 5/8 x 3/4-INCH METER?

12 A. Yes. The Company accepts staff and RUCO recommended off-site facilities fee  
13 in the amount of \$1,500.

14 Q. DOES THAT CONCLUDE YOUR REJOINDER TESTIMONY?

15 A. Yes.

***ARIZONA WATER COMPANY***



**Docket No. W-01445A-11-0310**

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**2011 RATE HEARING**

**For Test Year Ending 12/31/10**

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**PREPARED  
REJOINDER TESTIMONY & EXHIBITS  
OF  
THOMAS M. ZEPP**

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**ARIZONA WATER COMPANY**

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**Rejoinder Testimony of  
THOMAS M. ZEPP**

**I. Introduction, Purpose of Testimony and Summary**

**Q. PLEASE STATE YOUR NAME AND ADDRESS.**

A. My name is Thomas M. Zepp. My business address is 1500 Liberty Street, S.E., Suite 250, Salem, Oregon 97032.

**Q. ARE YOU THE SAME THOMAS M. ZEPP THAT PREVIOUSLY PROVIDED DIRECT AND REBUTTAL TESTIMONY IN THIS MATTER?**

A. Yes. I previously filed direct testimony and rebuttal testimony on the appropriate cost of equity. My professional background and experience are described in my direct testimony.

**Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?**

A. On behalf of the applicant, Arizona Water Company ("Arizona Water" or "the Company").

**Q. WHAT IS THE PURPOSE OF YOUR REJOINDER TESTIMONY?**

A. The purpose of this rejoinder testimony is to respond to the cost of capital surrebuttal testimony of John A. Cassidy on behalf of the Arizona Corporation Commission's ("Commission"), Utilities Division ("Staff") and the cost of capital surrebuttal testimony of William A. Rigsby on behalf of the Residential Utility Consumer Office ("RUCO").

**Q. HAS YOUR RECOMMENDED COST OF EQUITY FOR ARIZONA WATER CHANGED BASED ON THE TESTIMONIES PRESENTED BY MR. CASSIDY AND MR. RIGSBY?**

A. No. It is my opinion that the Company should be authorized a return on equity of 12.5%. I fully explain the basis for that recommendation in my direct testimony.

1 While expected interest rates have decreased since March 2011 when I prepared  
2 that cost of equity estimate, others indicators of the cost of equity indicate the  
3 12.5% cost of equity still falls within a reasonable range of equity cost estimates  
4 for Arizona Water's Eastern Group and thus my recommendation is still  
5 appropriate at this time.

6 My 12.5% ROE recommendation falls within Staff's May 7, 2012 range of  
7 estimates of the cost of equity for its water utilities sample of 8.2% to 12.7% (See  
8 Surrebuttal Schedule JAC-3), while noting that Staff's range does not address  
9 Arizona Water's Eastern Group's higher risk than the water utilities sample,  
10 further corroborating the reasonableness of my 12.5% recommendation.

11 RUCO has not corrected the significant flaws in its cost of equity  
12 approaches which I pointed out in my rebuttal testimony. Mr. Rigsby continues to  
13 use a risk-free rate that violates the founding principles set forth by William  
14 Sharpe, one of the scholars who developed the CAPM. By ignoring this error, he  
15 estimates a range of costs of equity with his CAPM approach of 3.73% and  
16 5.25%, which are both less than the expected cost of more risky corporate  
17 bonds, and which fail any test of reasonableness. (See Zepp Rebuttal Table 8)  
18 With respect to his DCF estimates, he continues to give little if any weight to the  
19 best forecasts of future growth (analyst's forecasts of EPS growth), relies on  
20 negatively biased estimates of dividend yields, and thus biases downward his  
21 DCF estimates. As a result, it is not possible to compare his range of ROE  
22 estimates to my 12.5% ROE recommendation without attempting to repair those  
23 flaws.

24 **Q. HOW IS YOUR REJOINDER TESTIMONY ORGANIZED?**

25 A. In Section II, I respond to Mr. Rigsby's surrebuttal testimony. In Section III, I  
26 respond to Mr. Cassidy's surrebuttal testimony.

27 **II. Responses to Mr. Rigsby**

28 **Q. AT PAGE 7 OF HIS SURREBUTTAL TESTIMONY, MR. RIGSBY COMPARES**



**ACC STAFF AND RUCO RECOMMENDED ROES TO YOUR RECOMMENDED ROE OF 12.5%. DO YOU HAVE ANY INFORMATION THAT PLACES HIS COMPARISON IN PERSPECTIVE?**

A. Yes. Rejoinder Table 1 shows RUCO and ACC Staff have consistently recommended ROEs that have been lower than the national average of ROEs authorized for water utilities.<sup>1</sup> Moreover, the data indicate that the gap between RUCO and Staff's recommendations and the national average has increased. Arizona Water's Eastern Group is more risky than the water utilities in the sample group and thus one should expect the recommended ROE to be higher than the national average. Contrary to that expectation, both RUCO and Staff are recommending ROEs that are lower than the national average.

**Q. YOU POINTED OUT SEVERAL SERIOUS FLAWS IN MR. RIGSBY'S TESTIMONY. HAS HE RESPONDED TO YOUR COMMENTS ABOUT THOSE SERIOUS ERRORS?**

A. No. He has not responded to them. Mr. Rigsby may be unable to respond to my comments because he cannot defend his use of flawed input. The huge differences between the results of his analysis and mine are due to errors and flaws in his analysis.

**Q. AT PAGE 8, LINE 14, MR. RIGSBY STATES VALUE LINE HAS FORECASTED 8.5 PERCENT TO 9.5 PERCENT RETURNS ON BOOK EQUITY FOR WATER UTILITIES FOR THE PERIOD 2012 TO 2017. PLEASE PUT THOSE NUMBERS IN PERSPECTIVE.**

A. Value Line does not explain how those numbers are computed. However, Value Line does report estimated future ROEs for the five companies in RUCO's water utilities sample which Mr. Rigsby could have used to calculate an average for the sample he chose for his analysis. Once those projections are corrected to a mid-

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<sup>1</sup> Data in Table 1 provided to the Company by Insight Consulting.

1 period basis, the returns on book equity average 10.8% -- 130 basis points to  
2 230 basis points higher than the range Mr. Rigsby chose to report. (See  
3 Rejoinder Table 2.) The Value Line forecasts of ROEs also include an estimated  
4 future ROE for Aqua America of 12.5%, which becomes 12.8% after correction to  
5 a mid-period basis. As Aqua America is many times larger than Arizona Water  
6 and thus less risky, the Value Line projections corroborate the reasonableness of  
7 my recommended ROE of 12.5% for the Eastern Group.

8 **Q. AT PAGE 9, LINE 4, MR. RIGSBY REPORTS AN 11.80% RETURN FOR THE**  
9 **MARKET. PLEASE PUT THAT NUMBER IN PERSPECTIVE.**

10 A. It appears that number came from Table 2-1 in Morningstar, Ibbotson SBBI, 2012  
11 Valuation Yearbook, page 23. It is an average of total annual returns for "Large  
12 Company Stocks" during the period 1926-2011. If past average returns provide a  
13 useful indication of required future returns for Arizona Water's Eastern Group,  
14 however, there are other numbers in that same table that are more relevant to a  
15 consideration of the required ROE for Arizona Water's Eastern Group. One is a  
16 reported historical return of 18.0% for Micro-Cap Stocks. Based on the data in  
17 Table 1 of my direct testimony, Arizona Water is the size of a Micro-Cap  
18 company. My recommended ROE of 12.5% is 550 basis points lower than the  
19 long-horizon average return earned by a typical Micro-Cap company. To the  
20 extent the Commission decides to rely on the Morningstar data as suggested by  
21 Mr. Rigsby, those data indicate a 12.5% ROE is a conservative measure of the  
22 return required by the Company.

23 **Q. DOES HIS CALCULATED BETA OF 1.48 AT PAGE 9 LINE 17 CAST DOUBT**  
24 **ON YOUR RECOMMENDED ROE?**

25 A. No. It ignores the Morningstar data in Chapter 7 of both the 2011 and 2012  
26 Editions of the SBBI Valuation Yearbook that show a risk premium is required for  
27 smaller companies. Those risk premiums would need to be recognized in a  
28 calculation of an implied beta and thus his calculation at page 9 has no merit.

1 Q. ONCE ONE RECOGNIZES THAT HIS CALCULATED BETA OF 1.48 IS  
2 BASED ON INCOMPLETE INFORMATION, SHOULD ANY WEIGHT BE GIVEN  
3 TO HIS COMMENTS ABOUT UNREGULATED COMPANIES AT PAGE 10  
4 AND 11?

5 A. No.

6 Q. HAS MR. RIGSBY CHALLENGED THE VALIDITY OF ANY OF YOUR  
7 COMMENTS ABOUT THE FLAWS AND BIASES YOU POINTED OUT IN  
8 YOUR REBUTTAL?

9 A. No, he has not. Common sense tells us an estimate of the cost of equity must be  
10 higher than the cost of more risky bonds, but his CAPM estimates do not pass  
11 that common sense test. Also, Mr. Rigsby's DCF estimates are biased  
12 downward for two major reasons. One reason is that in both his direct and  
13 surrebuttal testimonies (Schedules WAR-3), he uses dividends from a prior  
14 period or the current year to compute yields when he should have used dividends  
15 for next year. Also, in both testimonies, he gave minimal weight to EPS growth  
16 forecasts made by analysts when he determined growth rates expected by  
17 investors. Both choices bias his DCF estimates downward. Mr. Rigsby had the  
18 opportunity to repair these flaws when he prepared his surrebuttal testimony and  
19 respond to my comments, but he did neither. I provide a more detailed summary  
20 of my concerns with his DCF and CAPM analyses at page 22 of my rebuttal  
21 testimony.

22 Q. PLEASE SUMMARIZE THE FLAWS IN HIS DCF ANALYSIS?

23 A. I pointed out several obvious flaws in his DCF estimates.

- 24 • His estimates of dividend yields are understated and inconsistent with
- 25 methods ACC Staff has used in past cases.
- 26 • He does not adjust estimates of dividends for the time value of money.
- 27 • His estimates of br growth are understated because he fails to make the
- 28 standard adjustment routinely made by the FERC and ACC Staff which

1 puts projected ROEs on a mid-period basis.

- 2 • His estimates of sv growth are arbitrary and inconsistent with assumptions
- 3 underlying the DCF model.
- 4 • His approach cuts estimates of sv growth in half.
- 5 • He focuses on estimates of br+sv growth which he compares to some
- 6 other indicators of growth but fails to give weight to other readily available
- 7 indicators of growth, such as analysts' forecasts of EPS growth reported
- 8 by Yahoo! Finance and Reuters and forecasts of MPPS reported by Value
- 9 Line. The Value Line forecasts of potential capital gains are clearly as
- 10 important to investors as DPS and BVPS growth.
- 11 • He does not acknowledge that estimates of br+sv growth for utilities are
- 12 probably based on circular logic.

13 All of these shortcomings in his analysis bias downward his cost of equity

14 estimates. If these issues had been addressed, RUCO's cost of equity estimates

15 would be much higher.

16 **Q. PLEASE SUMMARIZE THE FLAWS IN HIS CAPM APPROACH?**

17 The primary flaw in his CAPM analysis stems from an inconsistency between the

18 inputs he adopts to implement the CAPM and empirical studies which support the

19 proxy for the RF in the model to be no less than the expected return on long-term

20 Treasury rates.

- 21 • At page 29 of his direct testimony, Mr. Rigsby points to William Sharpe as
- 22 an authority on the CAPM. But, in Professor Sharpe's textbook, Sharpe
- 23 reports that empirical studies indicate the proxy for RF must be larger than
- 24 the low Treasury rates Mr. Rigsby uses to implement the model.
- 25 • This inappropriate choice for RF leads Mr. Rigsby to estimate CAPM costs
- 26 of equity in both his direct testimony and in his surrebuttal testimony that
- 27 are lower than the cost of investment grade debt and thus would be
- 28 confiscatory.

- If forecasts of long-term Treasury rates and methods previously used by ACC Staff to determine a range of MRP estimates are employed, the indicated cost of equity range for Mr. Rigsby's water utilities sample is 9.2% to 14.7%.
- At page 58 of his direct testimony, Mr. Rigsby offers his opinion that forecasted rates tend to be overly optimistic, but provides no evidence to support his opinion.
- Other studies have found forecasts are not expected to be biased or "overly optimistic", as Mr. Rigsby opines.

In such a case, it is more appropriate to rely on interest rates expected during the period new prices for utility services will be in place.

### **III. Responses to Mr. Cassidy**

**Q. AT PAGE 4 OF HIS SURREBUTTAL TESTIMONY, MR. CASSIDY CONTENDS THE DIFFERENCE BETWEEN A RISK-FREE RATE OF 5.17% YOU RELIED UPON TO PREPARE DIRECT TESTIMONY AND A MORE CURRENT FORECAST OF THE RISK-FREE RATE OF 3.58% RELIED UPON BY MS. AHERN JUSTIFIES A LOWER COST OF EQUITY THAN THE 12.5%. DO YOU HAVE A RESPONSE?**

A. Yes. First, Mr. Cassidy apparently overlooked my rebuttal testimony at page 3. I acknowledge that the forecast of the risk-free rate based on an average of data for the next three years has dropped from 5.17% to 4.42% (See Rebuttal Table 8). In that testimony I state, "While expected interest rates have decreased since March 2011 when I prepared that cost of equity estimate, other indicators of the cost of equity indicate the 12.5% cost of equity still falls within a reasonable range of equity cost estimates for Arizona Water's Eastern Group and thus my recommendation is still appropriate at this time" (See Zepp Rebuttal, pages 3-4).

Second, multiple estimates of the cost of equity, that include DCF costs of equity as well as RP cost of equity estimates should be considered when

1 determining the authorized ROE. A change in the risk-free rate is only one of  
2 several indicators of the change in the cost of equity that should be considered  
3 by the Commission.

4 Third, at page 4, line 23, Mr. Cassidy states "for every basis point increase  
5 to the risk-free rate, there is a corresponding one basis point increase to the  
6 estimated cost of equity." This statement is wrong for several reasons. One is  
7 shown in Table 13 in my direct testimony. That table demonstrates that when the  
8 ACC Staff method is used to determine CAPM estimates, the current market risk  
9 premium ("MRP") may vary from as little as 4.2% to as much as 28.8%. Such  
10 changes in the MRP have a greater impact on the CAPM estimate than the  
11 relatively small changes in the risk-free rate. Furthermore, analyses I presented  
12 in Tables 15 and 16 of my direct testimony show that risk premiums increase  
13 when interest rates decrease. In the most recent five year periods, interest rates  
14 have decreased while risk premium estimates have increased, disproving Mr.  
15 Cassidy's statement. Rejoinder Table 3 confirms the results in Tables 15 and 16;  
16 it provides the results of statistical study based on data for the period 1983 to  
17 2011 that shows the estimated slope (" $A_1$ ") in the equation  $RP = A_0 + A_1 \times$   
18 Treasury rate, is negative and statistically significant different than zero. In this  
19 formula, RP is the risk premium, the Treasury rate is the long-term Treasury rate  
20 and  $A_0$  is the intercept.

21 Finally, Ms. Ahern and I have different approaches about how the  
22 forecasted risk-free rate should be determined in rate cases. I believe it is more  
23 appropriate to adopt an average of forecasted interest rates for a 3-year period.  
24 The future 3-year period has been adopted in many California water utility rate  
25 cases and is reasonable for Arizona given the time it takes to process a rate case  
26 and the period of time those new rates may be in effect. Ms. Ahern adopts an  
27 average of recent quarterly forecasts from Blue Chip (See Ahern's Exhibit PMA-  
28 11, page 1 of 2). In some situations, the difference in the periods we consider

1 may lead to a difference in the risk-free rate adopted for rate-making purposes.  
2 (At the present time, this difference is 84 basis points.) But the choice of the  
3 appropriate future period for RF is only one factor which should be considered.  
4 Equity costs made with the DCF model as well as risk premiums estimated with  
5 various models should also be considered when determining what is a fair ROE  
6 for Arizona Water. To be consistent with decisions of the U. S. Supreme Court,  
7 the final result should be reasonable. And that final result should be based on  
8 consideration of results from multiple models as well as the future period used to  
9 determine projections of the expected risk-free rate.

10 **Q. AT PAGE 6, MR CASSIDY RESPONDS TO YOUR CRITICISM OF STAFF FOR**  
11 **GIVING TOO LITTLE WEIGHT TO ANALYSTS' FORECASTS OF EPS**  
12 **GROWTH. DO YOU HAVE A RESPONSE?**

13 A. Yes. First, he did not respond to the evidence I provided. He offers no response  
14 to the fact that analysts' forecasts of growth are superior to estimates of growth  
15 based on past data and are superior to other forecasts of growth based on the  
16 opinions of only Value Line analysts. Division of Ratepayer Advocates Staff at  
17 the California PUC gives a 50% weight to analysts' EPS forecasts. While the  
18 evidence I provided in rebuttal in this case indicate 50% is still too small a weight,  
19 such a weighting provides a better indicator of growth expected by investors than  
20 would a method that give analysts' forecasts minimal weight as is done by Mr.  
21 Cassidy. It is inappropriate to give the best indicator of growth expected by  
22 investors the same weight as the other information. Mr. Cassidy provides no  
23 justification for the choice he made.

24 **Q. DOES MR. CASSIDY'S TESTIMONY AT PAGE 7, LINES 1 TO 12 JUSTIFY**  
25 **IGNORING FORECASTS OF GROWTH MADE BY ANALYSTS THAT ARE**  
26 **READILY AVAILABLE ON THE INTERNET?**

27 A. No, absolutely not. While I agree that Value Line forecasts and data may be  
28 examined by investors, it is far more convenient for investors to turn on their

1 computers and obtain consensus projections of future EPS growth reported by  
2 Reuters, Yahoo! Finance or Zacks. Staff's method is inadequate because it  
3 ignores these low cost sources of information that are typically considered by  
4 knowledgeable investors and, as a result, the ACC Staff method biases  
5 downward its cost of equity estimates.

6 **Q. DOES MR. CASSIDY'S TESTIMONY AT PAGE 7, LINES 14 TO 24 JUSTIFY**  
7 **EXCLUSION OF AMERICAN WATER WORKS FROM ITS ANALYSIS?**

8 A. No, it does not. The goal of ACC Staff should be to obtain the best available  
9 estimates of future growth. Rebuttal Table 6 shows that more analysts follow  
10 American Water Works than any other water company and thus there is a wealth  
11 of information about what analysts expect will happen in the future for that  
12 company.

13 Mr. Cassidy states AWK is excluded because Staff's DCF analysis  
14 requires consideration of past data. His logic is that because there is  
15 "incomplete" data for AWK, it should not be considered. This position is in  
16 conflict with inclusion of Connecticut Water in his analysis. At page 7, lines 10-  
17 12, Mr. Cassidy notes that Value Line provides limited information for  
18 Connecticut Water but Staff does not exclude it from its sample even though data  
19 for Connecticut Water is also "incomplete". Staff's decision to exclude American  
20 Water Works but include Connecticut Water is unsupportable and biases  
21 downward Staff's cost of equity estimates.

22 **Q. DO YOU HAVE ANY OTHER OBSERVATIONS ABOUT CONNECTICUT**  
23 **WATER?**

24 A. Yes. My Rebuttal Table 6 shows that an average of analysts' forecasts for  
25 Connecticut Water is 7.9%, a value above the 4.8% growth rate adopted by ACC  
26 Staff. Staff's decision to include Connecticut Water in its sample but ignore  
27 estimates of growth that are readily available to investors on the Internet would  
28 not change the average of analysts' growth rate estimates, which is also 7.9%.



(See my Rebuttal Table 6) But by excluding the analysts' forecasts for Connecticut Water from consideration, Staff estimates projected EPS growth of only 6.5% (See Surrebuttal Schedule JAC-5) and ends up with a growth rate of only 4.8% (See Surrebuttal Schedule JAC-8). Whether intended or not, Staff's decision to exclude analysts' forecasts of growth for Connecticut Water creates a downward bias in its DCF cost of equity estimates.

**Q. AT PAGE 8, LINE 17 – 23, MR. CASSIDY OFFERS STAFF'S CONCLUSION REGARDING YOUR INCLUSION OF AMERICAN WATER WORKS IN YOUR SAMPLE. DO YOU HAVE A RESPONSE TO THAT TESTIMONY?**

A. Yes. At page 15, line 22 to page 16, line 14 of my direct testimony, I explain the basis for my choice of companies in my water utilities sample. I explain that I chose the first six companies to be consistent with the sample used by ACC Staff in past cases and included American Water Works ("AWK"). I noted that AWK is the largest water utility in the United States and provide data in Table 1 and 2 which list the characteristics of the seven companies in the sample. The data in Table 1 are required to compare the sample companies to Arizona Water. In the past, I excluded Southwest Water from my sample because it had less than 50% of its revenues coming from regulated operations. Southwest Water is no longer publicly traded. Table 2 provides beta estimates for all of the sample companies. In past cases, I excluded AWK from the sample because there was no beta estimate available. Value Line now reports a beta estimate for AWK. Table 7 provides analysts' estimates of growth and Value Line estimates of growth when they are available. Even though there were a limited number of estimates of growth for some of the water utilities in the sample, I included all of them in the sample.

At page 8, lines 19-21, Mr. Cassidy suggests a "standard" to be met when selecting a company to be included in the water utilities sample is that there are data to estimate both historical and prospective estimates of growth. Staff,

1           however, does not meet its own self-declared "standard". If it did, Staff would not  
2           have included Connecticut Water in its analysis. I disagree with the "standard"  
3           Staff suggests, and note that the data in Table 1 is available to compare a  
4           sample company to Arizona Water, and in fact, should be used in any such  
5           comparison and not ignored.

6   **Q.     DOES THIS COMPLETE YOUR REJOINDER TESTIMONY?**

7   **A.     Yes.**

# TABLES

**ARIZONA WATER EASTERN GROUP  
DOCKET NO. W-01445A-11-0310**

**Rejoinder Table 1**

**Proposed Returns on Equity (ROE) for Water Utilities  
2008 to 2011**

	<b>COMPANY</b>	<b>Docket Number</b>	<b>Decision Number</b>	<b>Decision Date</b>	<b>ROE Proposed By RUCO</b>	<b>ROE Proposed By Staff</b>
1	Johnson Utilities	08-0180	72579	9/15/2011	8.30%	n/a
2	Bella Vista Water, Northern/Southern Sunrise	09-0411	72251	4/7/2011	9.00%	9.30%
	AVERAGE OF ARIZONA 2011 DECISIONS				8.65%	9.30%
	U.S. AVERAGE 2011 DECISIONS				10.11%	10.11%
	DIFFERENCE				-1.46%	-0.81%
3	Coronado Utilities	09-0291	71956	11/1/2010	n/a	10.50%
4	Global Water--Palo Verde	09-0077	71878	9/15/2010	9.00%	10.00%
5	Global Water--Santa Cruz	09-0077	71878	9/15/2010	9.00%	10.00%
6	Global Water--Greater Buckeye	09-0777	71878	9/15/2000	9.00%	10.00%
7	Global Water--Valencia Town	09-0077	71878	9/15/2010	9.00%	10.00%
8	Global Water--Willow Valley	09-0077	71878	9/15/2010	9.00%	10.00%
9	Black Mountain Sewer Corporation	08-0609	71865	9/1/2010	8.22%	10.20%
10	Litchfield Park Service Company	09-0103	72026	12/10/2010	9.00%	9.20%
11	Arizona Water Company	08-0440	71845	8/25/2010	8.33%	10.00%
12	Arizona-American Water	09-0343	72047	1/6/2011	9.50%	10.70%
	AVERAGE OF ARIZONA 2010 DECISIONS				8.89%	10.06%
	U.S. AVERAGE 2010 DECISIONS				10.34%	10.34%
	DIFFERENCE				-1.45%	-0.28%
13	Sunrise Water Co.	08-0406	71445	12/23/2009	n/a	10.00%
14	Arizona-American Water	08-0227	71410	12/8/2009	8.88%	10.00%
15	Chaparral City Water Co.	07-0551	71308	10/21/2009	8.83%	10.10%
	AVERAGE OF ARIZONA 2009 DECISIONS				8.86%	10.03%
	U.S. AVERAGE 2009 DECISIONS				10.51%	10.51%
	DIFFERENCE				-1.66%	-0.48%
16	Gold Canyon Sewer Company	06-0015	70624	11/19/2008	8.60%	9.20%
17	Arizona-American Anthem Water District	06-0403	70372	6/13/2008	10.01%	10.30%
18	Arizona-American Anthem/Agua Fria Wastewater District	06-0403	70372	6/13/2008	10.01%	10.30%
19	Arizona-American Sun City Wastewater District	06-0491	70209	3/20/2008	10.03%	10.60%
20	Arizona-American Sun City West Wastewater District	06-0491	70209	3/20/2008	10.03%	10.60%
	AVERAGE OF ARIZONA 2008 DECISIONS				9.74%	10.20%
	U.S. AVERAGE 2008 DECISIONS				10.44%	10.44%
	DIFFERENCE				-0.70%	-0.24%

5/8/2012

**ARIZONA WATER EASTERN GROUP**  
**DOCKET NO. W-01445A-11-0310**

**Rejoinder Table 2**

**Value Line Forecasts of Future ROEs Restated to a Mid-Period Basis**  
**RUCO's Water Utilities Sample**

Line		American States Water	California Water	Middlesex Water MSEX	SJW Corp	Aqua America	Average
1	Projected ROE Reported by Value Line	11.0%	10.5%	11.0%	8.0%	12.5%	10.6%
2	Value Line Forecast of BVPS Growth	4.5%	3.5%	1.0%	3.5%	4.5%	3.4%
3	FERC formula correction of ROE <sup>b/</sup>	11.2%	10.7%	11.1%	8.1%	12.8%	10.8%

**Notes and Sources:**

a/ Source of data: Value Line April 20, 2012.

b/ FERC formula is  $\text{adjusted ROE} = \text{ROE}^{\text{VL}} * 2 ((1 + \text{BVPSg})) / (2 + \text{BVPSg})$ , where  $\text{ROE}^{\text{VL}}$  is the ROE reported by Value Line. BVPS is book value per share.

5/8/2012

**ARIZONA WATER EASTERN GROUP  
DOCKET NO. W-01445A-11-0310**

**Rejoinder Table 3**

**Estimates of Risk Premiums for Water Utilities  
1983 - 2011**

$$\text{Risk premium}^{-a/} = A_0 + A_1 \times \text{Long-term Treasury Rate}^{-b/}$$

Regression Output:

Constant ( $A_0$ )	0.07688
Std Err of Y Est	0.00756
R Squared	0.60908
No. of Observations	29
Degrees of Freedom	27
Slope ( $A_1$ ) <sup>-c/</sup>	-0.41734
Std Err of Coef.	0.06435
t-statistic <sup>-c/</sup>	-6.48595

**Notes and Sources:**

- a/ Risk premium = Annual estimates of average cost of equity for samples of water utilities minus the Treasury rate.
- b/ Treasury rate = 30 year Treasury rate. If not available, then the 30-year rate implied by the 20-year rate.
- c/ Slope significantly less than zero at 1% level.

5/8/2012

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W-01445A-11-0310**

**ARIZONA WATER COMPANY**  
**2011 EASTERN GROUP RATE CASE**  
**Test Year Ended December 31, 2010**  
*(Searchable PDF)*



**Arizona Water Company's**  
**Rejoinder Testimonies and Exhibits**  
**Docket No. W-01445A-11-0310**  
*May 11, 2012*